Hytera

SERVICE MANUAL

DIGITAL WALL-MOUNTED REPEATER

Preface

This manual describes the information related to the product repair. It is intended for use by qualified technicians only. To repair the product properly, please read this manual carefully before repairing.

This manual is applicable to the following product:

RD62X Digital Wall-mounted Repeater

(X may represent 2, 5, 6 or 8)

Copyright Information

Disclaimer

Documentation Information

Conventions

Icon Conventions

Icon	Description
Tip	Indicates information that can help you make better use of your product.
Note	Indicates references that can further describe the related topics.
Caution	Indicates situations that could cause data loss or equipment damage.
Warning	Indicates situations that could cause minor personal injury.
Danger	Indicates situations that could cause major personal injury or even death.

Notation Conventions

Convention	Description
” ”	The quotation marks enclose the name of a software interface element. For example, click “OK”.
Bold	The text in boldface denotes the name of a hardware button. For example, press the **PTT** key.
->	The symbol directs you to access a multi-level menu. For example, to select “New” from the “File” menu, we will describe it as follows: “File -> New”.

Revision History

The table below lists all of the revision histories.

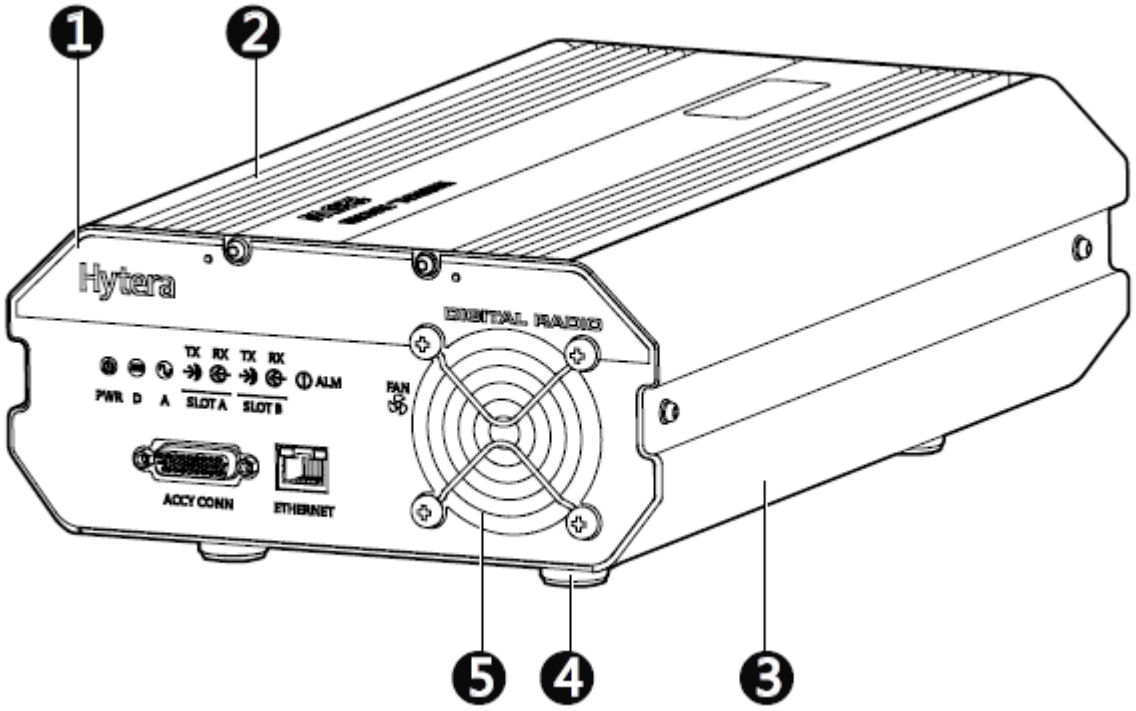
Version	Release Date	Description
R5.6	04-2014	Initial Release. Repair informations on UHF1 and VHF are released.

UHF1 (400 - 470MHz)

Contents

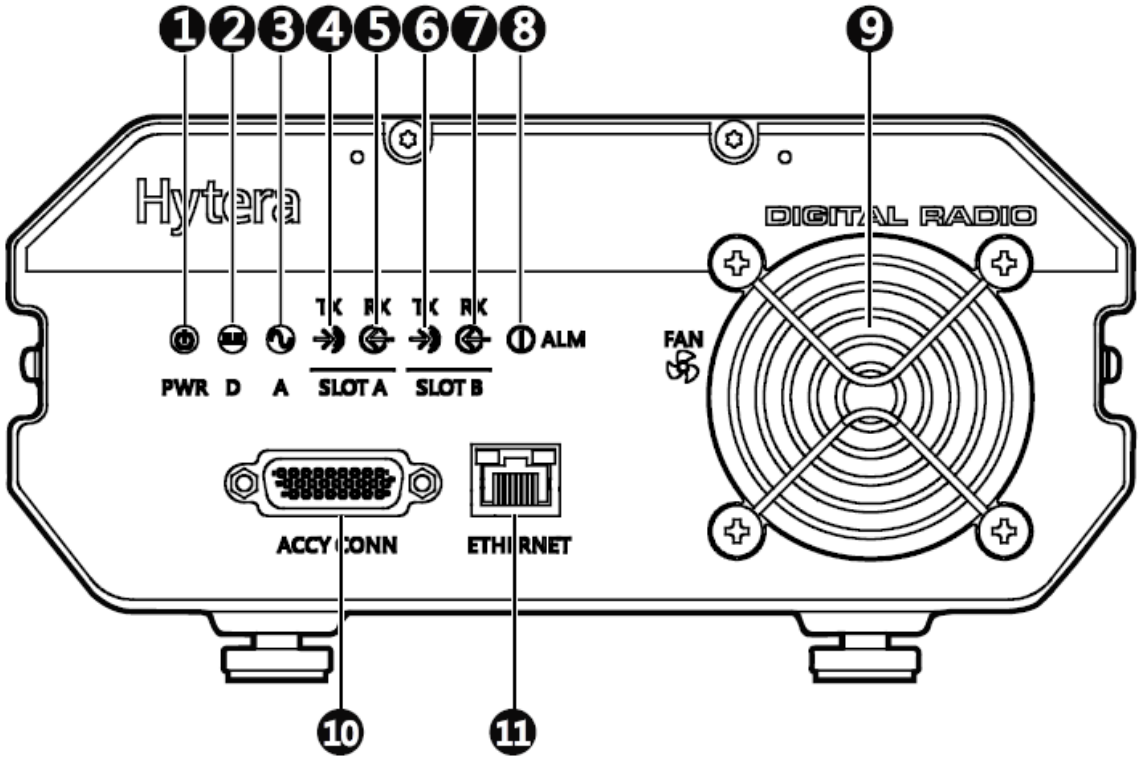
1. Product Overview

Parts



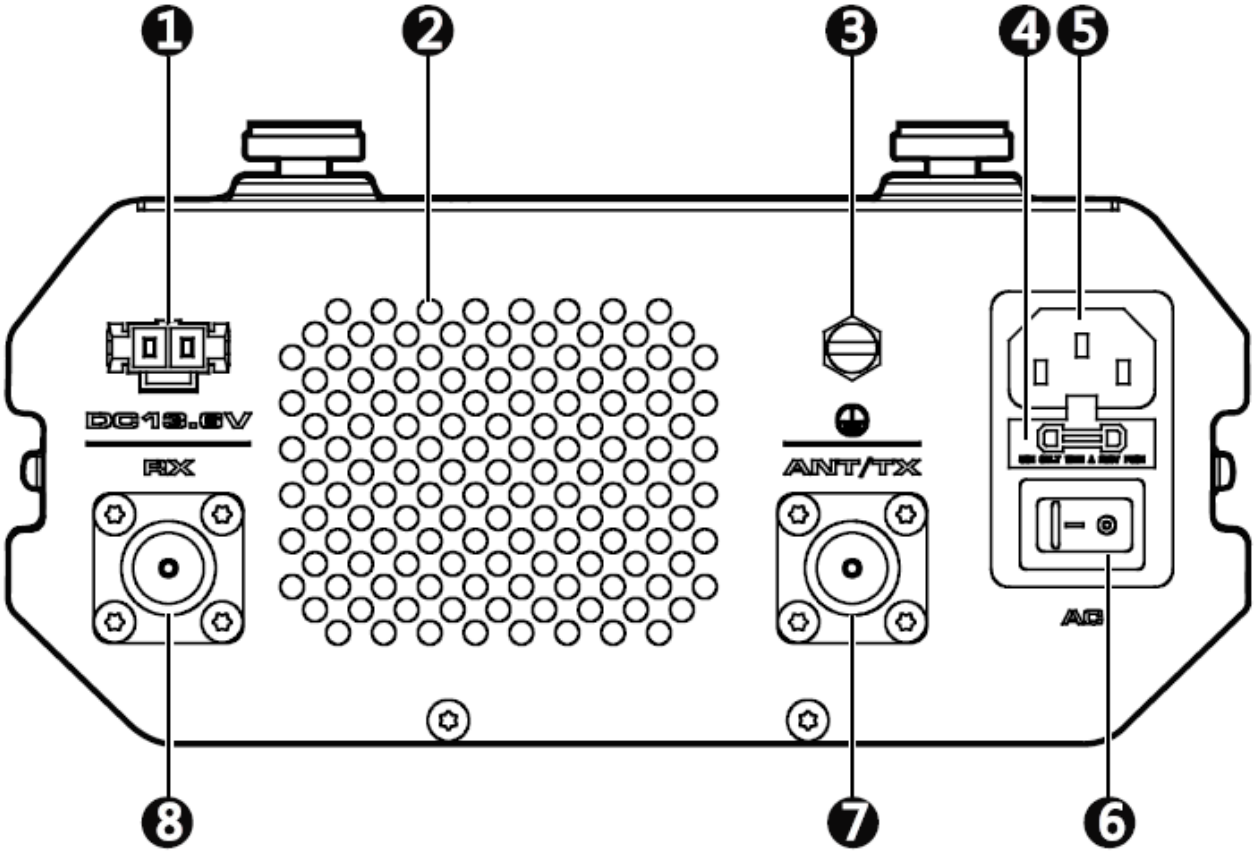
No.	Part Name	No.	Part Name
1	Front Panel	4	Foot Pad
2	Upper Cover	5	Fan Mesh Enclosure
3	Chassis	-	-

Front Panel



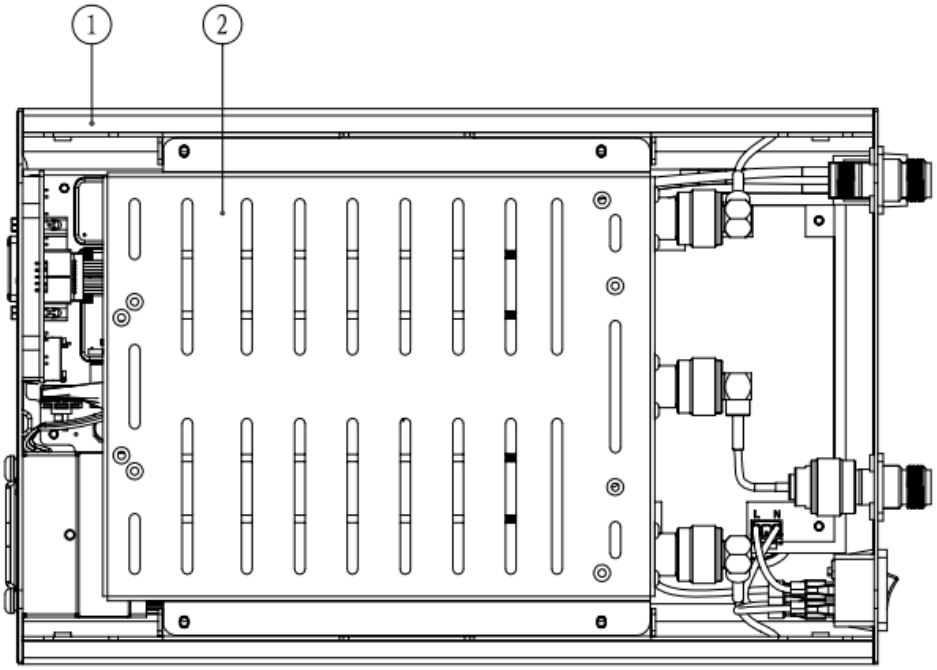
No.	Part Name	No.	Part Name
1	Power LED Indicator	7	Slot B RX LED Indicator
2	Digital Mode LED Indicator	8	Alarm LED Indicator
3	Analog Mode LED Indicator	9	Fan Inlet
4	Slot A TX LED Indicator	10	Accessory Connector
5	Slot A RX LED Indicator	11	Ethernet Interface
6	Slot B TX LED Indicator	-	-

Rear Panel

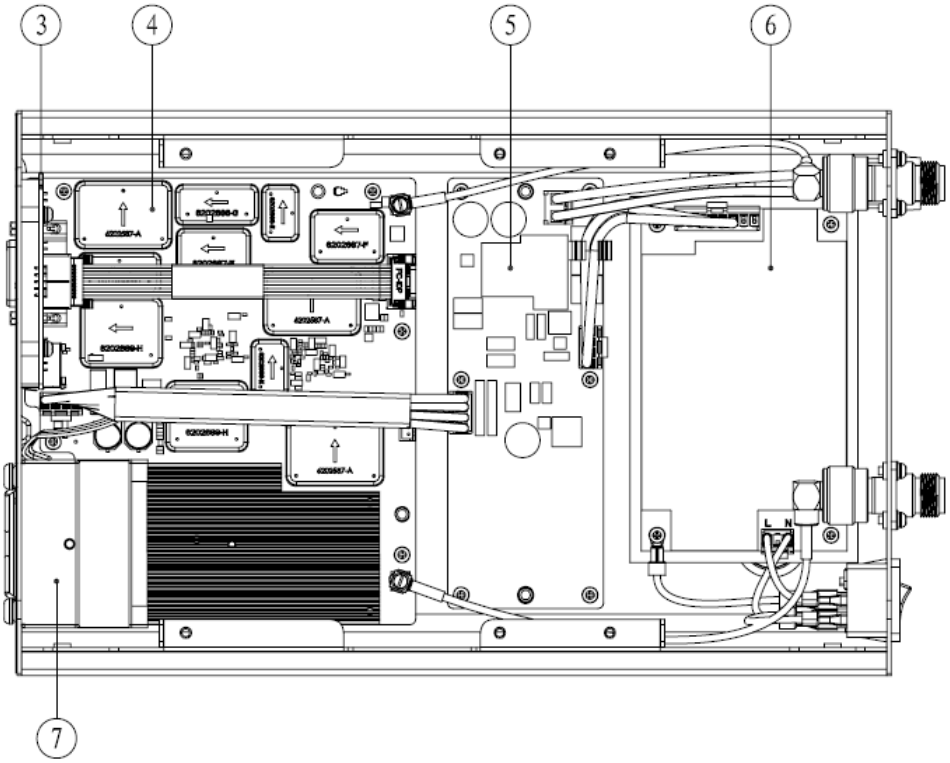


No.	Part Name	No.	Part Name
1	DC Power Inlet	5	AC Power Inlet
2	Fan Outlet	6	AC Power Switch
3	Ground Terminal	7	ANT/TX Antenna Connector (N-type, Female)
4	Fuse Box	8	RX Antenna Connector (N-type, Female)

Internal Parts (including duplexer)



Internal Parts (excluding duplexer)



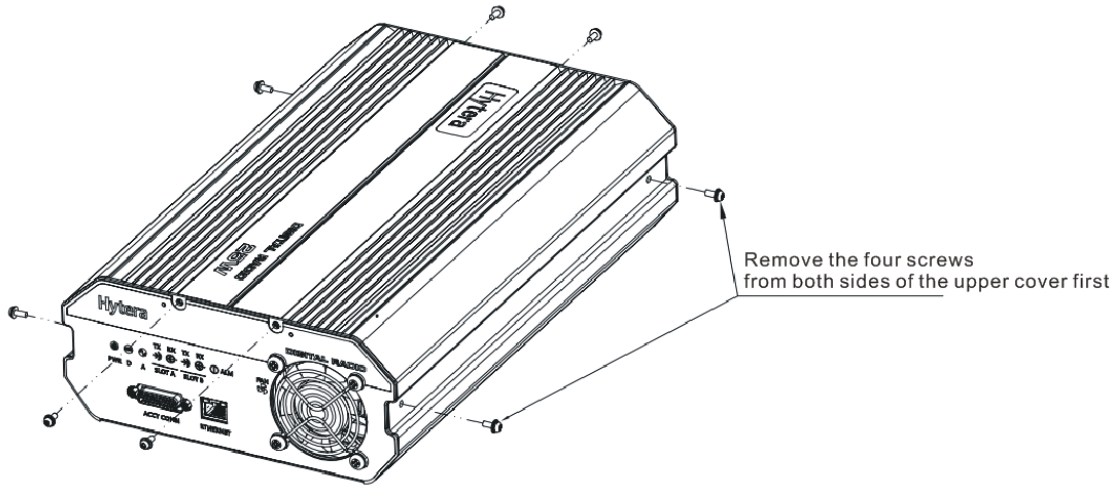
No.	Part Name	No.	Part Name
1	Main Body	5	Floating Charge PCB
2	Duplexer Module	6	Switching Power Module
3	LED Indicator PCB	7	Fan Module
4	Main PCB	-	-

2. Disassembly and Assembly

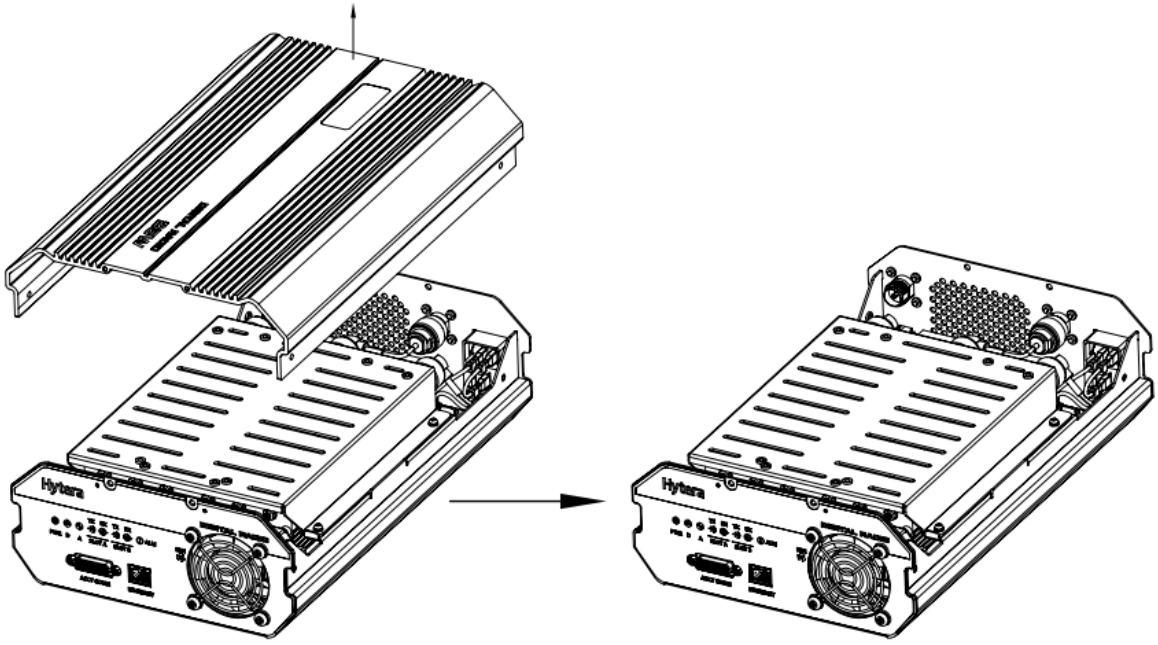
2.1 Disassembling

Step 1 Turn off the repeater and detach the power cord, antenna and Ethernet cable.

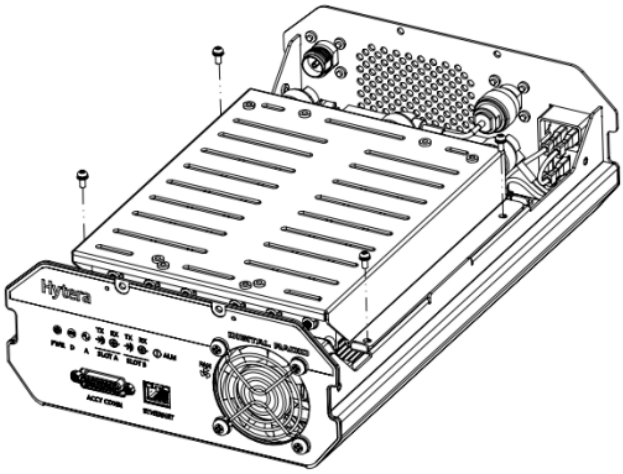
Step 2 Remove the four screws from both sides of the upper cover first, and then remove the four screws from front and rear panel.



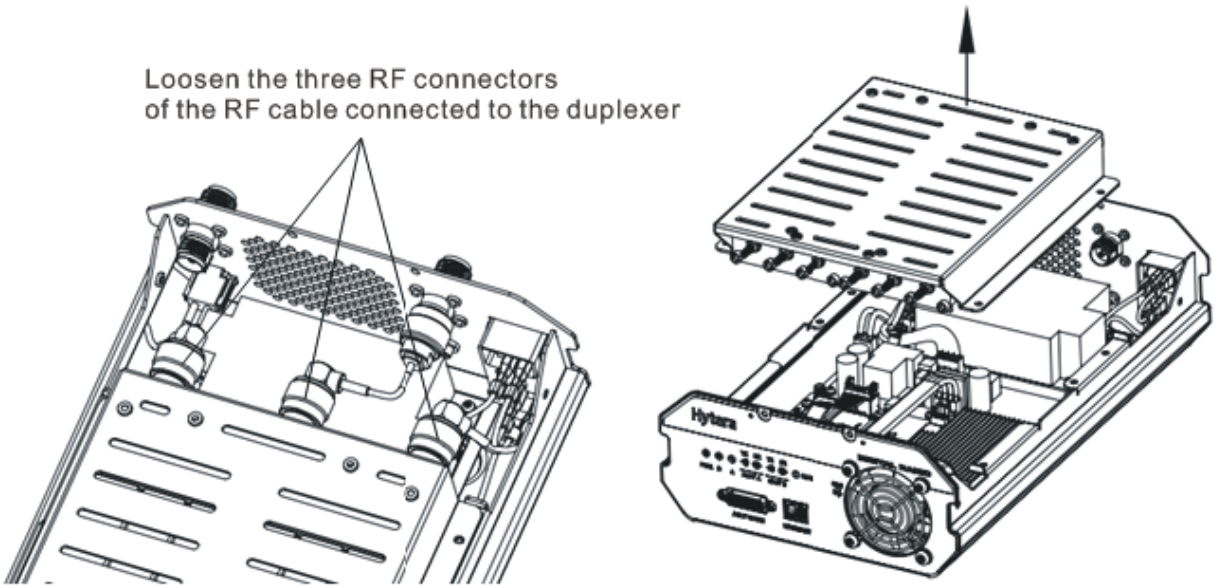
Step 3 Lift up the upper cover horizontally and remove it. Move to Step 7 if the repeater is not equipped with duplexer module.



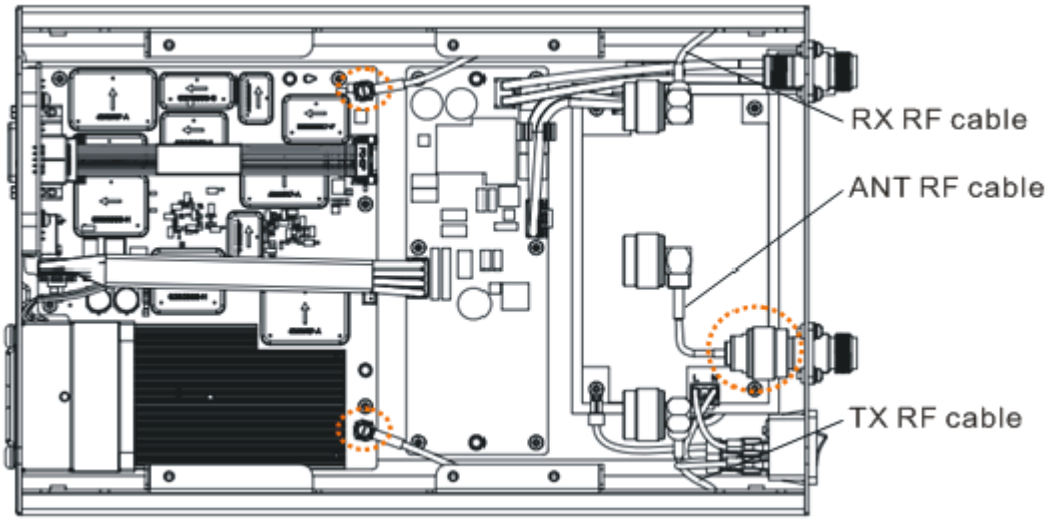
Step 4 Remove the four screws fixing the duplexer bracket.



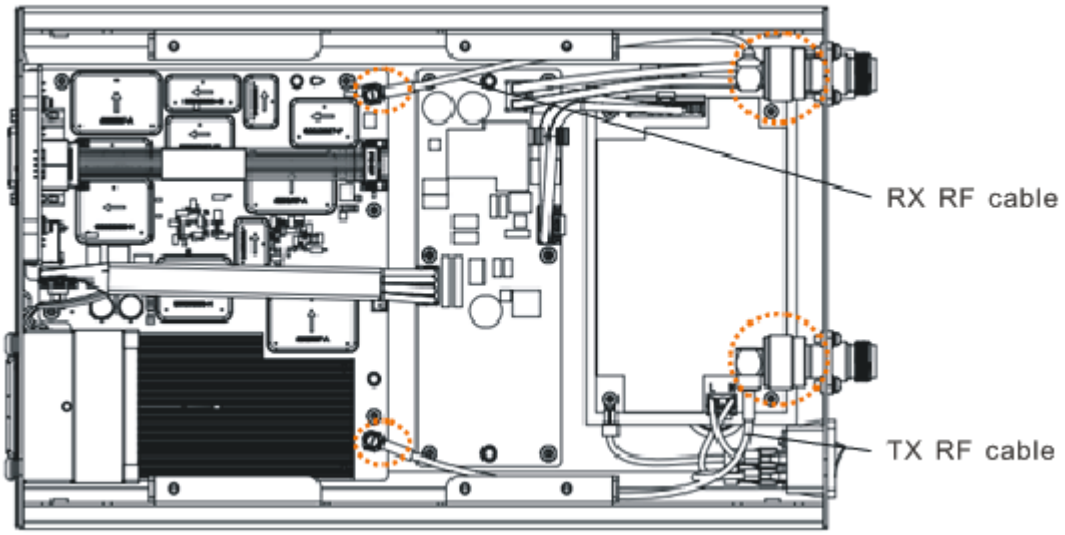
Step 5 Loosen the three RF connectors of the RF cable connected to the duplexer, and then lift up to take out the duplexer module.



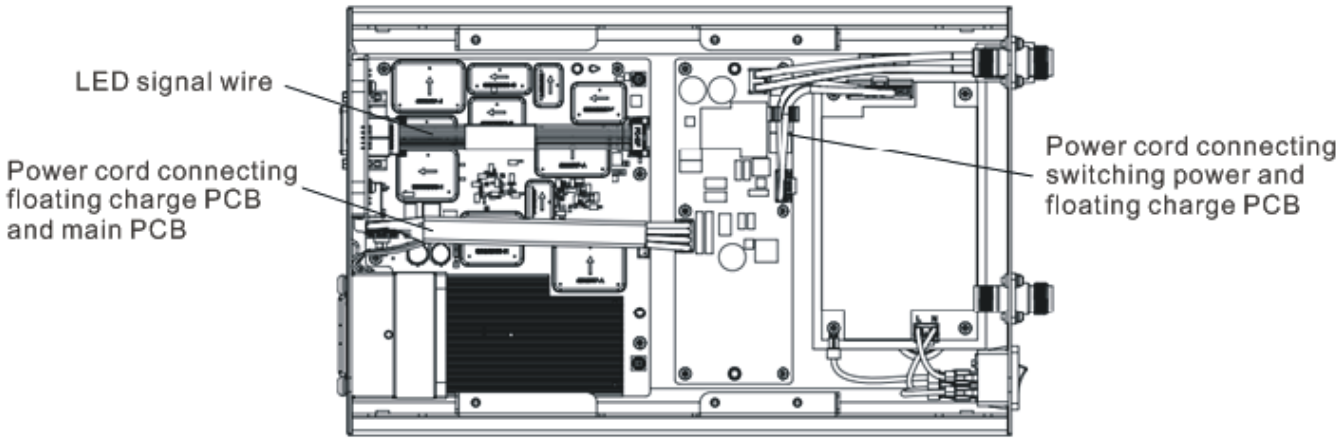
Step 6 Loosen the RF connectors marked in the figure below and remove the three RF cables.



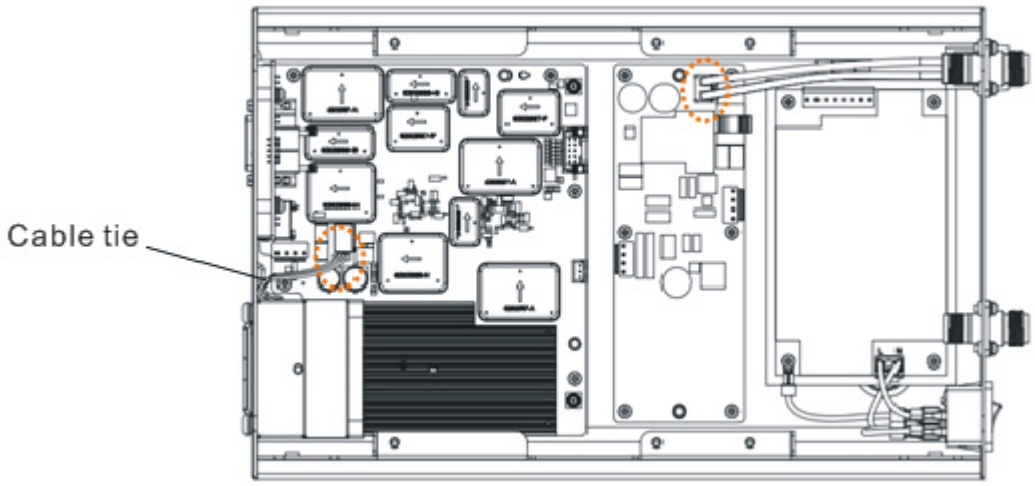
Step 7 Loosen the RF connectors marked in the figure below and remove the two RF cables.



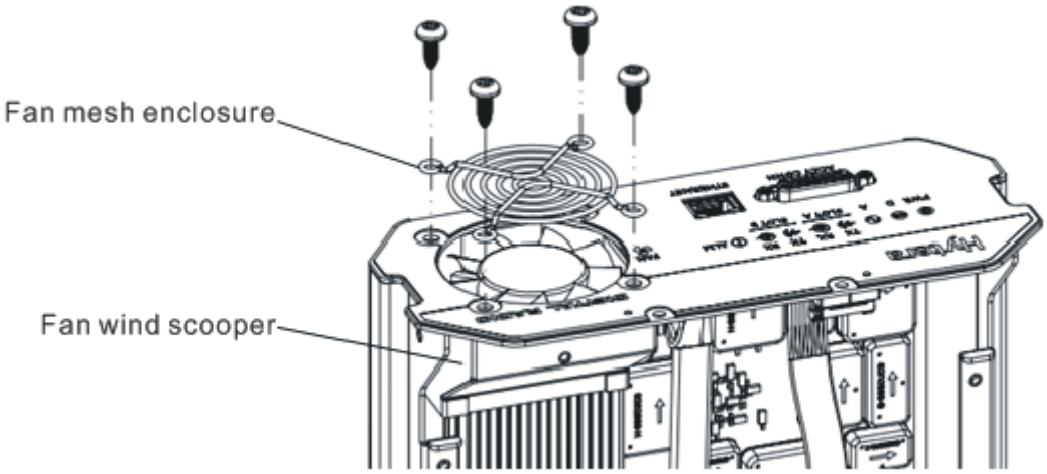
Step 8 Remove the power cords and signal wire marked in the figure below.



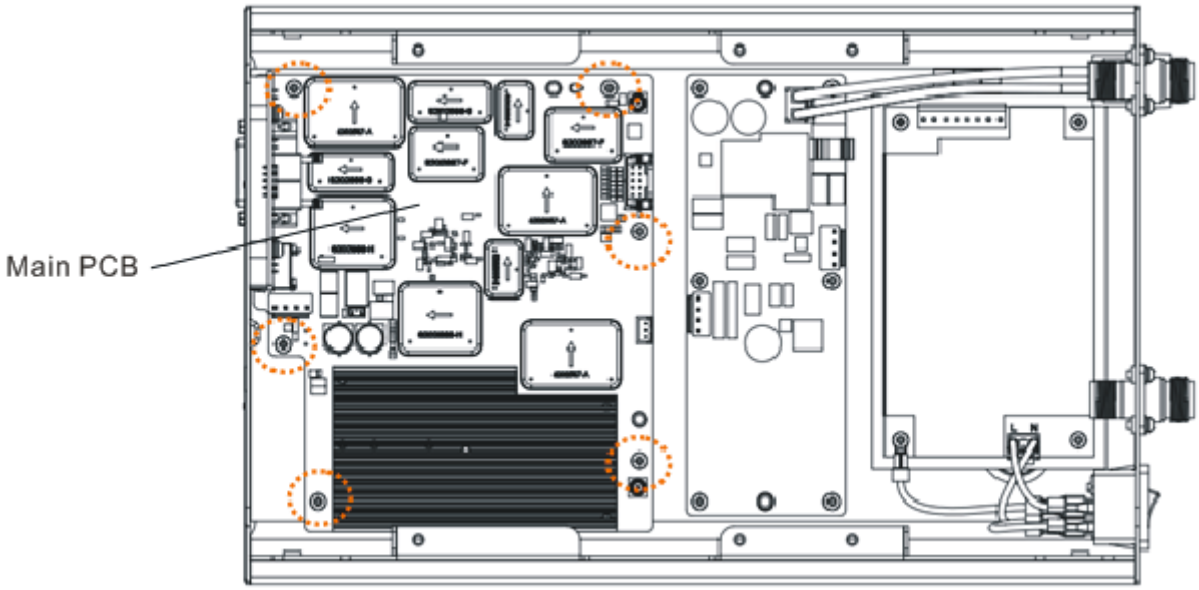
Step 9 Remove the power cord connector marked in the figure below. Cut the cable tie marked in the figure below for convenient operation afterwards.



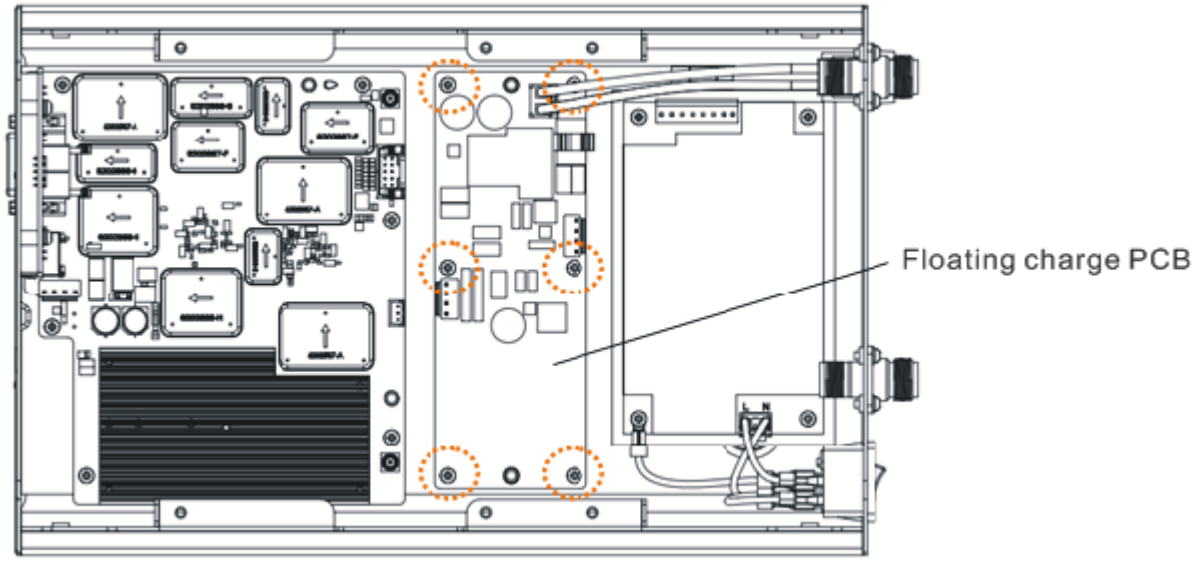
Step 10 Remove the four screws fixing the fan module and then take out the fan mesh enclosure and wind scooper.



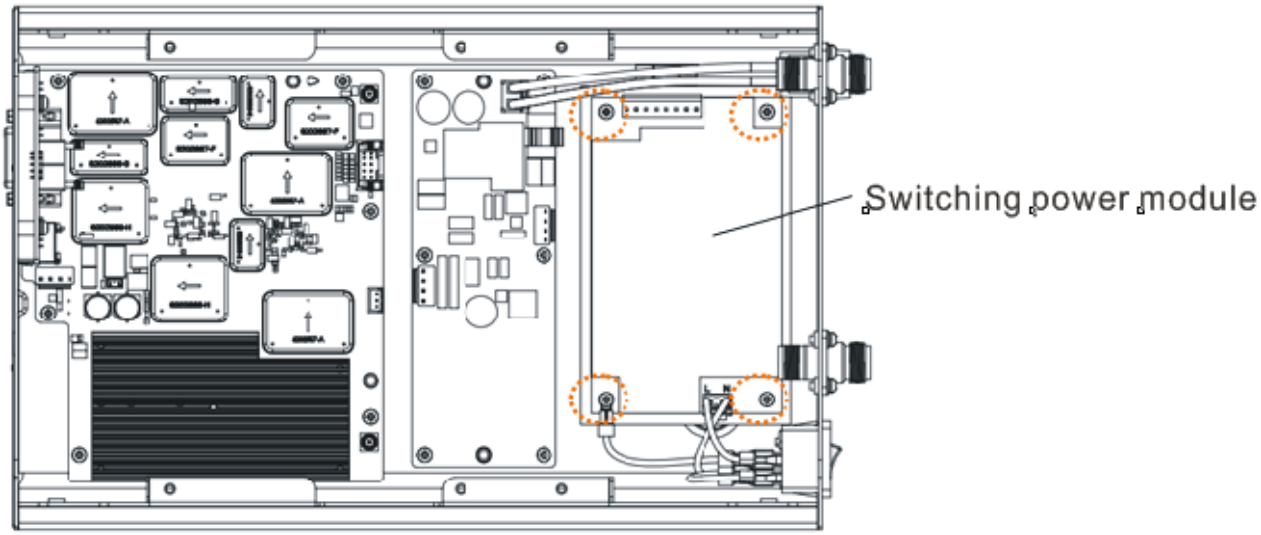
Step 11 Remove the six screws marked in the figure below and take out the Main PCB. Tilt to the upper right slightly when taking out the Main PCB.



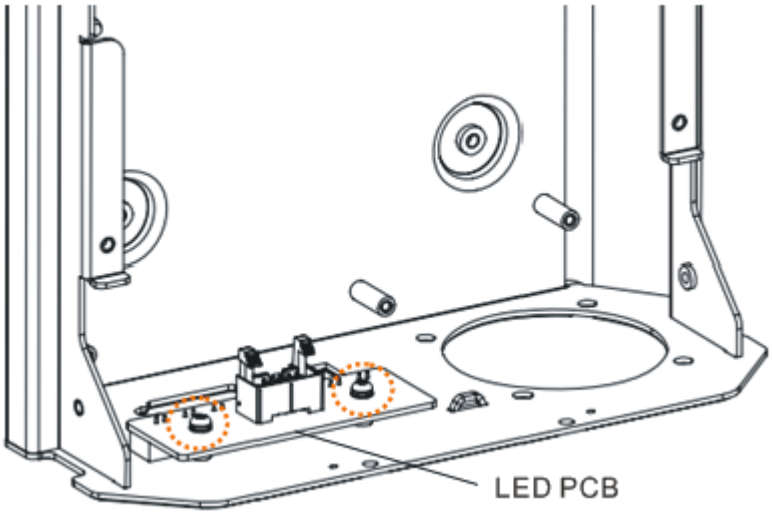
Step 12 Remove the six screws marked in the figure below and take out the Floating Charge PCB.



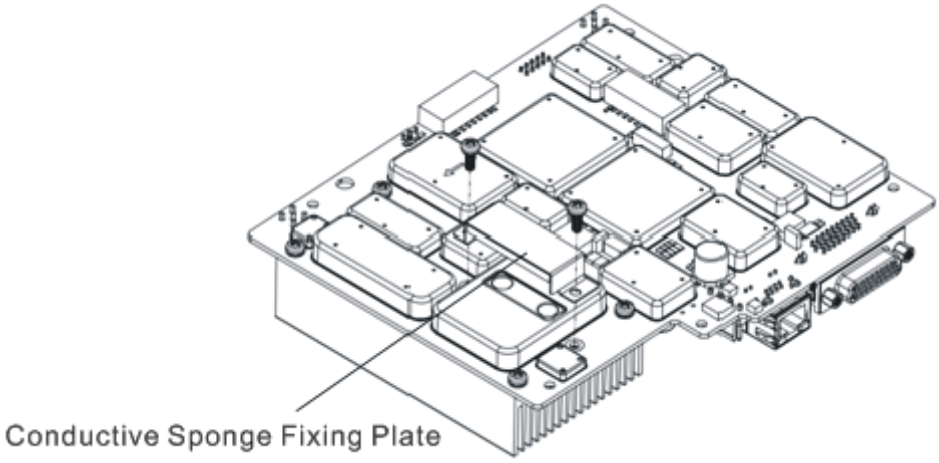
Step 13 Remove the four screws marked in the figure below and take out the Switching Power Module.



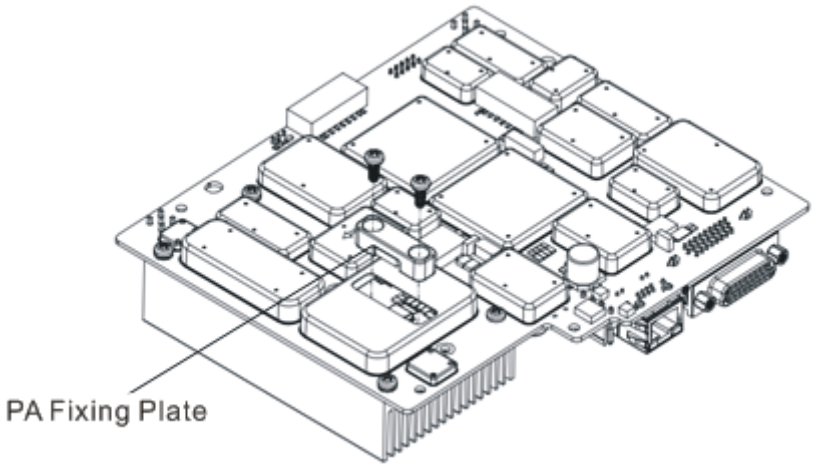
Step 14 Remove the two screws marked in the figure below and take out the LED PCB.



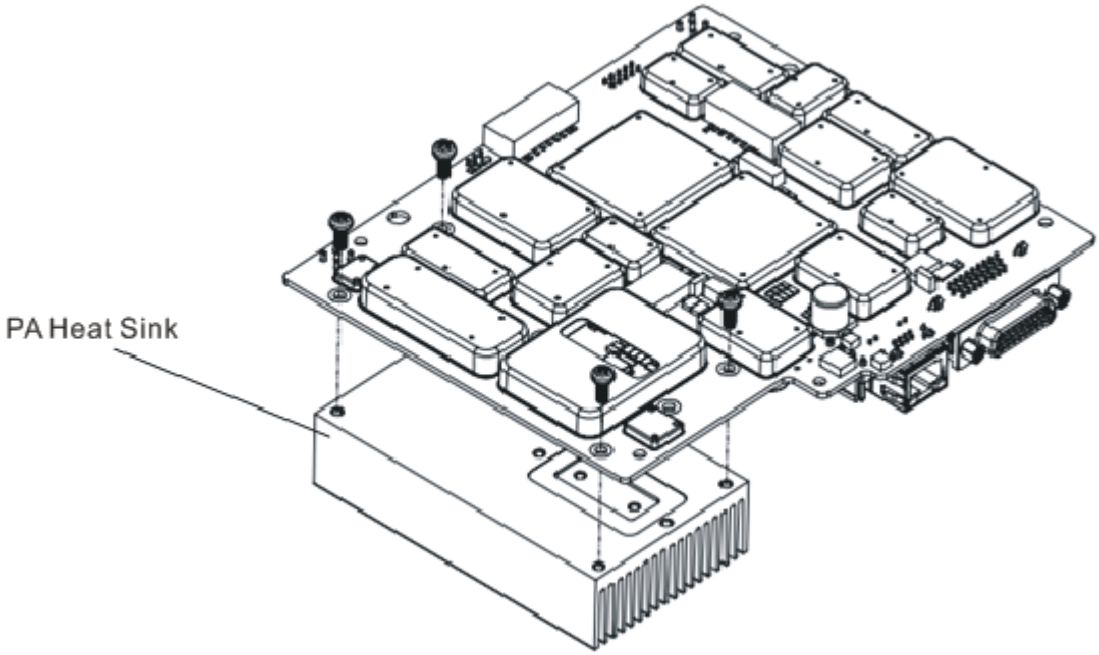
Step 15 Remove the two screws marked in the figure below, lift up and take out the Conductive Sponge Fixing Plate.



Step 16 Remove the two screws marked in the figure below and take out the PA Fixing Plate.

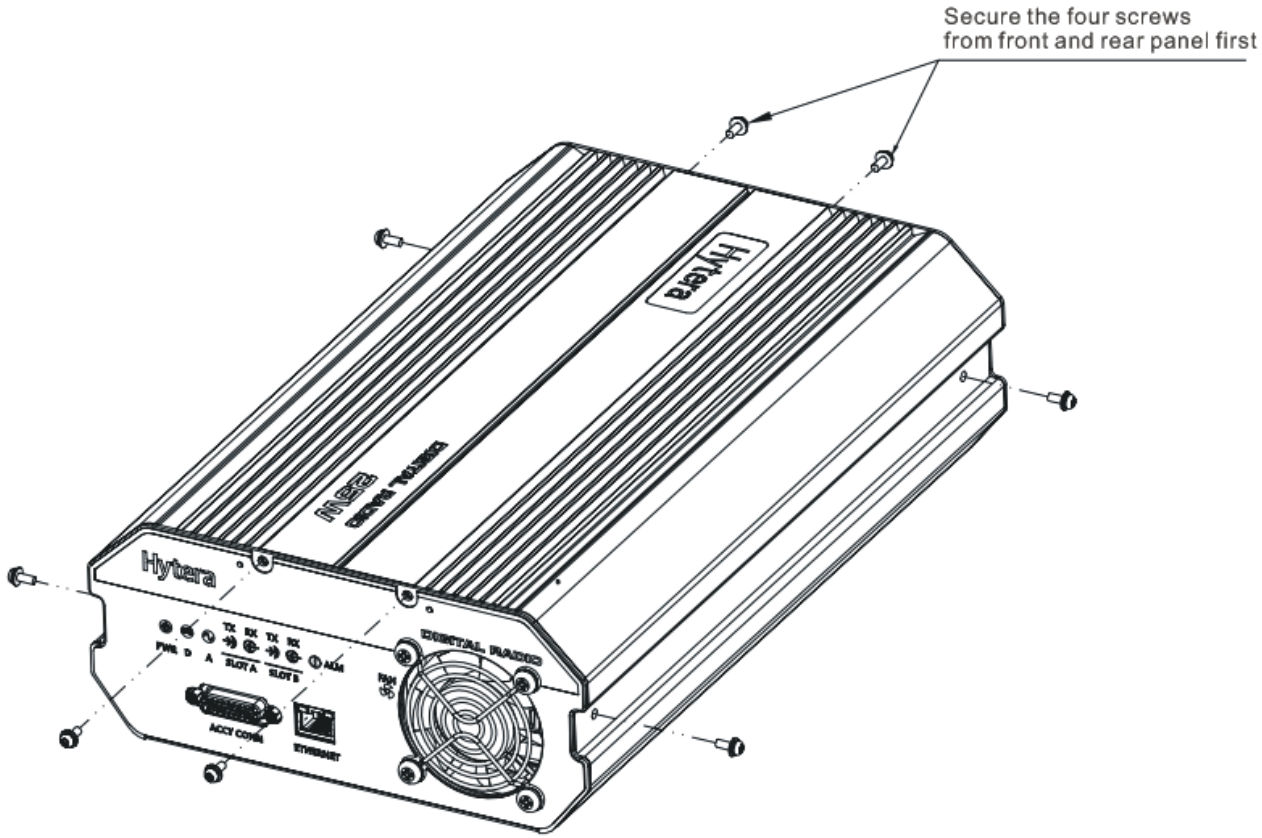


Step 17 Remove the four screws marked in the figure below and take out the PA Heat Sink.



2.2 Assembling

To assemble the repeater after disassembling, perform the above steps in a reversed order. Please note that when securing the screws on the upper cover, secure the four screws from front and rear panel first, and then secure the four screws from both sides of the upper cover.


Secure the four screws
from front and rear panel first
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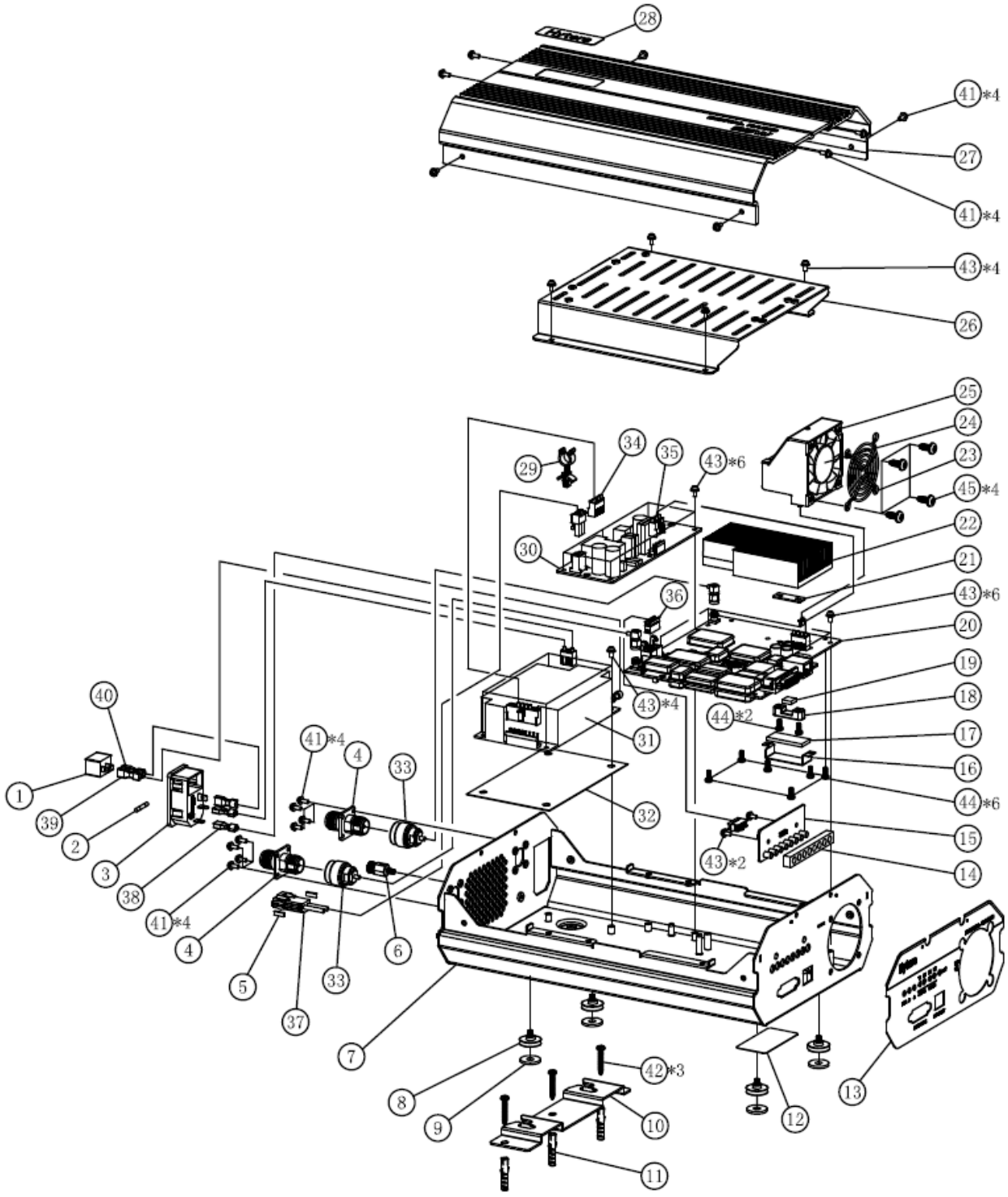
3. Exploded View and Packaging Guide

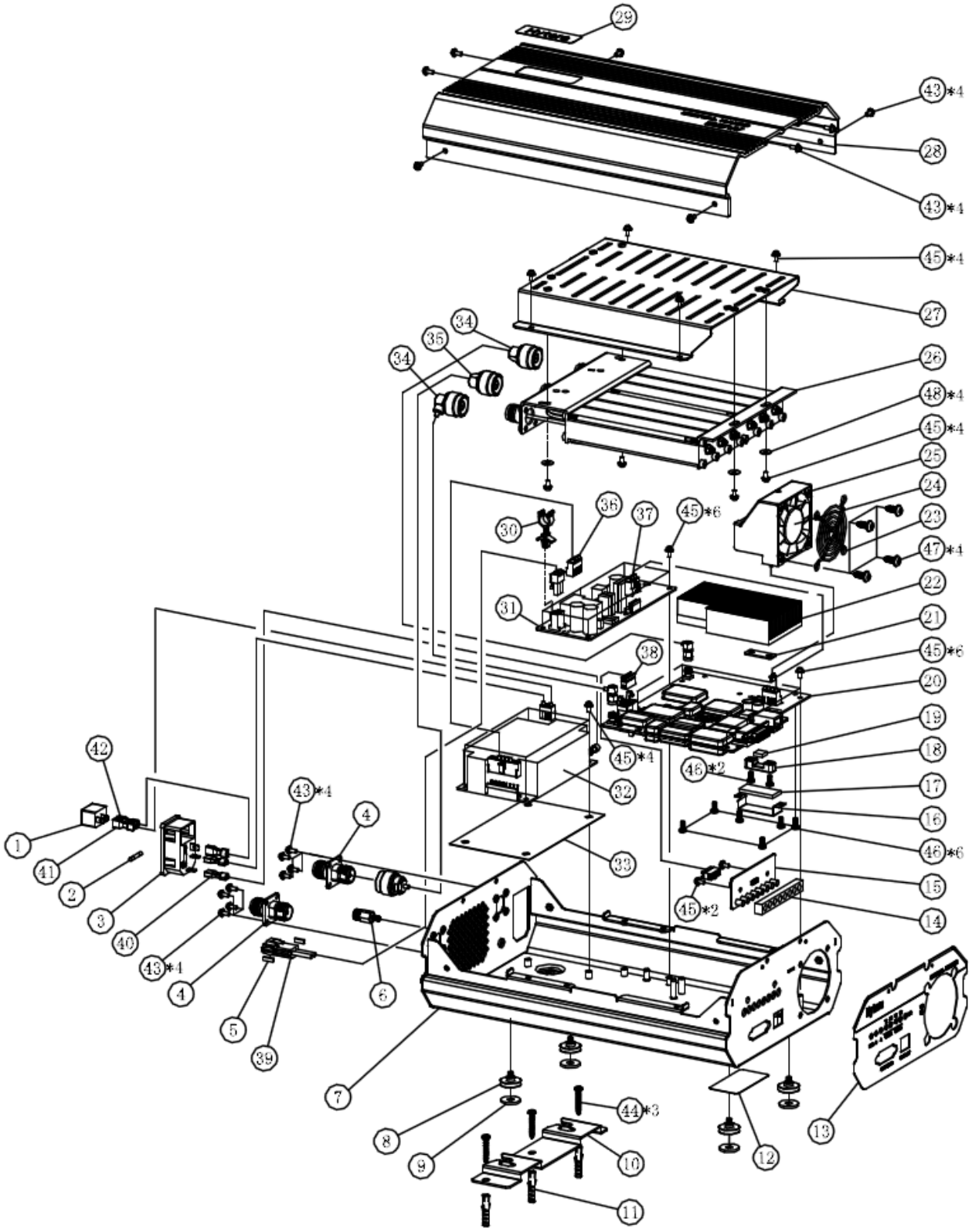
3.1 Exploded View (excluding duplexer)



Parts list:

No.	Part No.	Part Name	Qty.	No.	Part No.	Part Name	Qty.
1	4399010000000	Power Switch	1	24	5401000000200	Fan	1
2	4099000000150	Fuse	1	25	6203267000000	Fan Wind Scooper	1
3	5205003100210	AC Power Socket	1	26	6203268000000	Duplexer Fixing Bracket	1
4	4408100002000	Adapter RF Connector	2	27	6203265000000	Upper Cover	1
5	7500663000000	Connector Silicone Rubber Pad for DC Power Input Port	2	28	86RD960600000	Hytera Logo Label	1
6	7104008000600	Ground Terminal	1	29	7500660000000	Cable Hanger	1
7	6203264000010	Bottom Case	1	30	1615000000290	Floating Charge Board	1
8	7104005000010	Wall-mount Screws	4	31	1615000000280	Switching Power	1
9	6100994000000	Foot Pad	4	32	7400556000000	Bottom Insulation Pad for Switching Power Module	1
10	6203271000000	Wall-mount Bracket	1	33	4220190000400	RF Cable	2
11	75007610000000	Plastic Wall Anchor	3	34	4200210000000	Power Cord	1
12	86RD960100010	Blank Battery Label	1	35	4200210000100	Power Cord	1
13	86RD620700000	Front Panel Label	1	36	4210160000300	Signal Cable	1
14	7500662000000	LED Shading Pad	1	37	4200180001400	Power Cord	1
15	1302RD6200040	LED board, semi-finished, manually soldered	1	38	4200090000200	Power Cord	1
16	6203270000000	Conductive Sponge Fixing Plate for PA Shielding Mask	1	39	4200090000400	Power Cord	1
17	7500549000000	Conductive Sponge for PA Shielding Mask	1	40	4200090000300	Power Cord	1
18	6300189000000	PA Fixing Plate	1	41	7103008001000	Screws (M3.0*8.0mm)	16
19	7500661000000	PA Silicone Rubber Pad	1	42	7103925020000	Self-tapping Screws (ST3.9*25mm)	3
20	1302RD6200010	Main board, semi-finished, manually soldered	1	43	7103007000000	Screws (M3.0*7.0mm)	22
21	6203269000000	PA Heat Sink Pad	1	44	7103008000400	Screws (M3.0*8.0mm)	8
22	6203266000000	PA Heat Sink	1	45	7105012020000	Self-tapping Screws (ST5.0*12mm)	4
23	7000393000000	Fan Protective Cover	1	-	-	-	-

3.2 Exploded View (including duplexer)

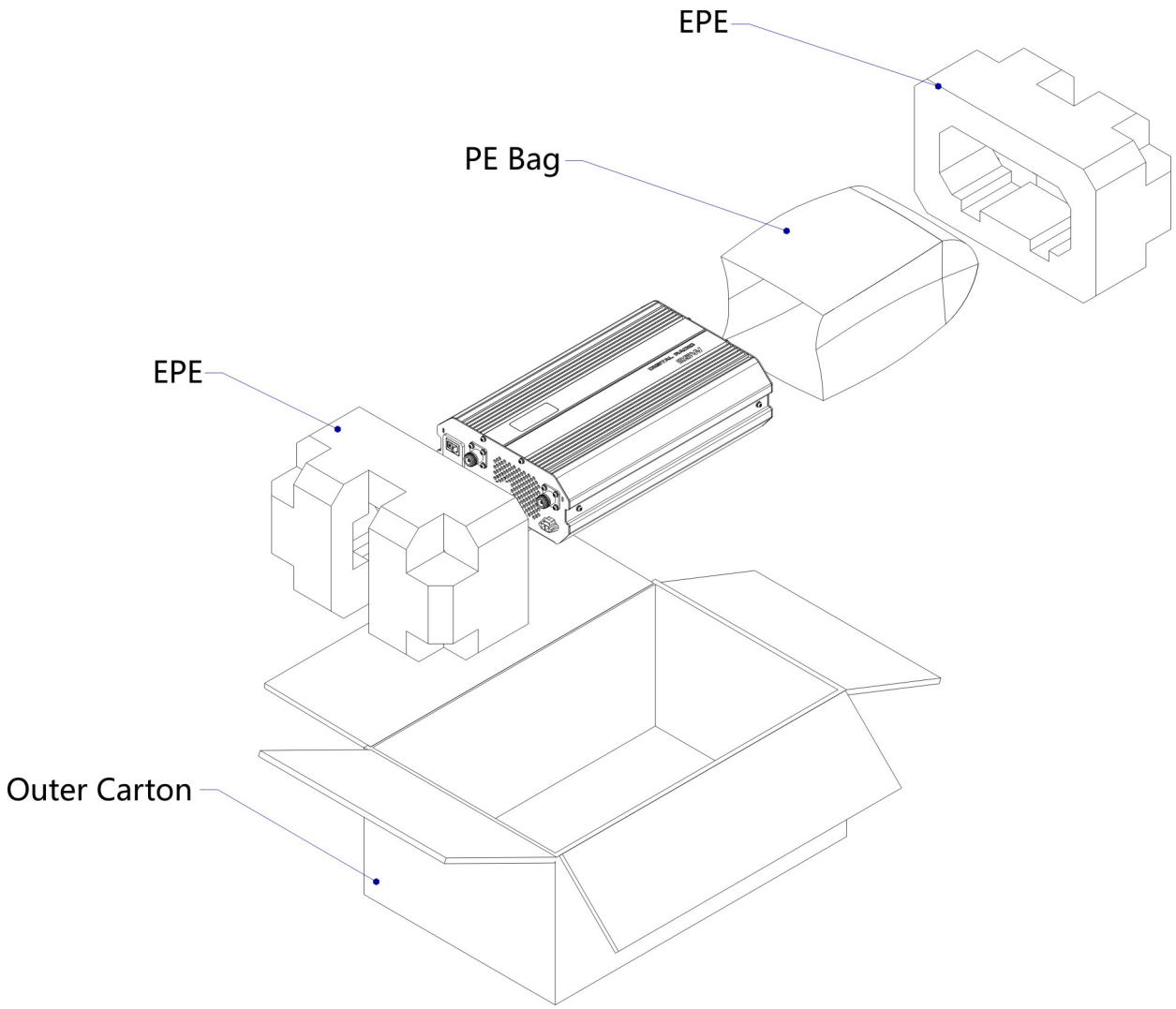


Parts list:

No.	Part No.	Part Name	Qty.	No.	Part No.	Part Name	Qty.
1	4399010000000	Power Switch	1	25	6203267000000	Fan Wind Scooper	1
2	4099000000150	Fuse	1	26	3804384770009	Duplexer	1
3	5205003100210	AC Power Socket	1	27	6203268000000	Duplexer Fixing Bracket	1
4	4408100002000	Adapter RF Connector	2	28	6203265000000	Upper Cover	1
5	7500663000000	Connector Silicone Rubber Pad for DC Power Input Port	2	29	86RD960600000	Hytera Logo Label	1
6	7104008000600	Ground Terminal	1	30	7500660000000	Cable Hanger	1
7	6203264000010	Bottom Case	1	31	1615000000290	Floating Charge Board	1
8	7104005000010	Wall-mount Screws	4	32	1615000000280	Switching Power	1
9	6100994000000	Foot Pad	4	33	7400556000000	Bottom Insulation Pad for Switching Power Module	1
10	6203271000000	Wall-mount Bracket	1	34	4220190000400	RF Cable	2
11	75007610000000	Plastic Wall Anchor	3	35	4220083000000	RF Cable	1
12	86RD960100010	Blank Battery Label	1	36	4200210000000	Power Cord	1
13	86RD620700000	Front Panel Label	1	37	4200210000100	Power Cord	1
14	7500662000000	LED Shading Pad	1	38	4210160000300	Signal Cable	1
15	1302RD6200040	LED board, semi-finished, manually soldered	1	39	4200180001400	Power Cord	1
16	6203270000000	Conductive Sponge Fixing Plate for PA Shielding Mask	1	40	4200090000200	Power Cord	1
17	7500549000000	Conductive Sponge for PA Shielding Mask	1	41	4200090000400	Power Cord	1
18	6300189000000	PA Fixing Plate	1	42	4200090000300	Power Cord	1
19	7500661000000	PA Silicone Rubber Pad	1	43	7103008001000	Screws (M3.0*8.0mm)	16
20	1302RD6200010	Main board, semi-finished, manually soldered	1	44	7103925020000	Self-tapping Screws (ST3.9*25mm)	3
21	6203269000000	PA Heat Sink Pad	1	45	7103007000000	Screws (M3.0*7.0mm)	22
22	6203266000000	PA Heat Sink	1	46	7103008000400	Screws (M3.0*8.0mm)	8
23	7000393000000	Fan Protective Cover	1	47	7105012020000	Self-tapping Screws (ST5.0*12mm)	4

No.	Part No.	Part Name	Qty.	No.	Part No.	Part Name	Qty.
24	5401000000200	Fan	1	48	6201585000000	Pad M3*0.8mm*0D10mm	4

3.3 Packaging Guide



4. Specification

Key specifications for UHF1 are shown in the table below:

General	
Frequency Range	400 - 470MHz
Channel Capacity	16
Channel Spacing	12.5 KHz/20 KHz/25 KHz
Operating Voltage	13.6±15% V DC 90 - 264 V AC
Current Drain	Standby Current<0.5 A Transmitting Current<5.5 A
Frequency Stability	±0.5 ppm
Antenna Impedance	50 Ω
Operating Temperature	-30 ℃ - +60 ℃
Dimension (H×W×D)	348x210x108 mm
Weight	5 Kg
Transmitter	
Power Output	1 - 25 W
Conducted/Radiated Spurious Emission	-36 dBm<1 GHz -30 dBm>1 GHz
FM Modulation	11K0F3E@12.5 KHz 14K0F3E@20 KHz 16K0F3E@25 KHz
4FSK Digital Modulation	12.5KHz (data only): 7K60FXD 12.5kHz (data and voice): 7K60FXW
Modulation Limiting	2.5 KHz@12.5 KHz 4.0 KHz@20 KHz

	5.0 KHz@25 KHz
FM Hum and Noise	-40 dB@12.5 KHz -43 dB@20 KHz -45 dB@25 KHz
Adjacent Channel Power	60 dB@12.5 KHz 70 dB@20/25 KHz
Audio Response	+1 - -3 dB
Audio Distortion	Analog≤3% Digital≤5%
Digital Vocoder Type	AMBE++ or SELP
Digital Protocol	ETSI-TS102 361-1, -2, -3
Receiver	
Sensitivity	Analog: 0.3 μV (12 dB SINAD) 0.22 μV (Typical) (12 dB SINAD) 0.4 μV (20 dB SINAD) Digital: 0.3μV/BER5%
Adjacent Channel Selectivity	TIA-603: 65 dB@12.5 KHz/75 dB@20/25 KHz ETSI: 60 dB@12.5 KHz/75 dB@20/25 KHz
Intermodulation	TIA-603: 75 dB@12.5/20/25 KHz ETSI: 70 dB@12.5/20/25 KHz
Spurious Response Rejection	TIA-603: 75dB@12.5/20/25KHz ETSI: 70dB@12.5/20/25KHz
Blocking	TIA-603: 90 dB ETSI: 84 dB
Hum and Noise	-40 dB@12.5 kHz

	-43 dB@20 kHz -45 dB@25 kHz
Max Receiving Audio Power	Internal (20Ω load): 8 W External (8Ω load): 20 W
Rated Audio Distortion	≤3%
Audio Response	+1 - -3 dB
Conducted Spurious Emission	<-57 dBm
Environmental Specifications	
Operating Temperature	-30℃ - +60℃
Storage Temperature	-40℃ - +85 ℃
ESD	IEC 61000-4-2 (level 4) ±2 kV (Contact discharge) ±4 kV (Air discharge)
American Military Standard	MIL-STD-810 C/D/E/F
Dust/Water Protection	IP2
Moisture Proof	MIL-STD-810 C/D/E/F
Shock and Vibration	MIL-STD-810 C/D/E/F

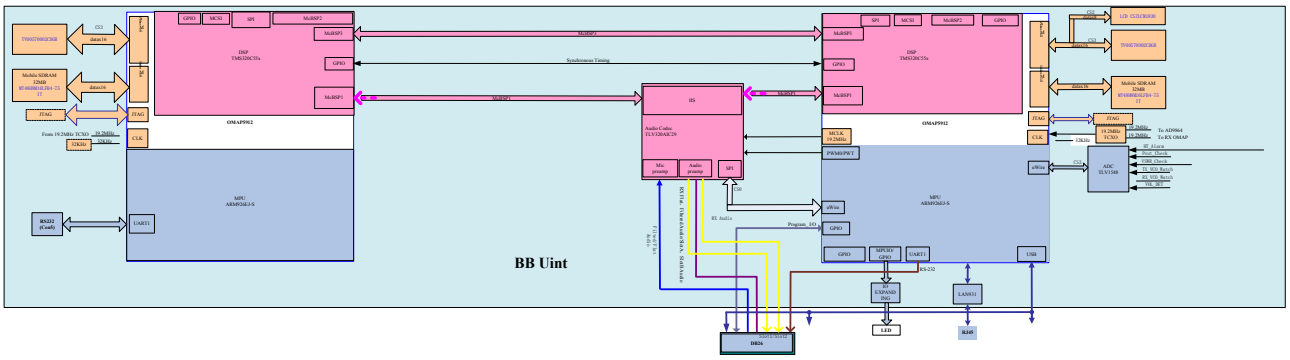
Note: All Specifications are tested according to applicable standards, and subject to change without notice due to continuous development.

5. Circuit Description

5.1 Front Panel

The front panel provides human-machine interaction and is only equipped with 8 LED indicators.

5.2 Baseband



As a highly integrated hardware platform, the control chip (OMAP5912) incorporates two processors: ARM+DSP. With a clock frequency of 19.2MHz, the control chip is of perfect processing performance. OMAP5912 accommodates multiple peripheral interfaces and versatile access methods, making desired functions available via the peripheral equipment.

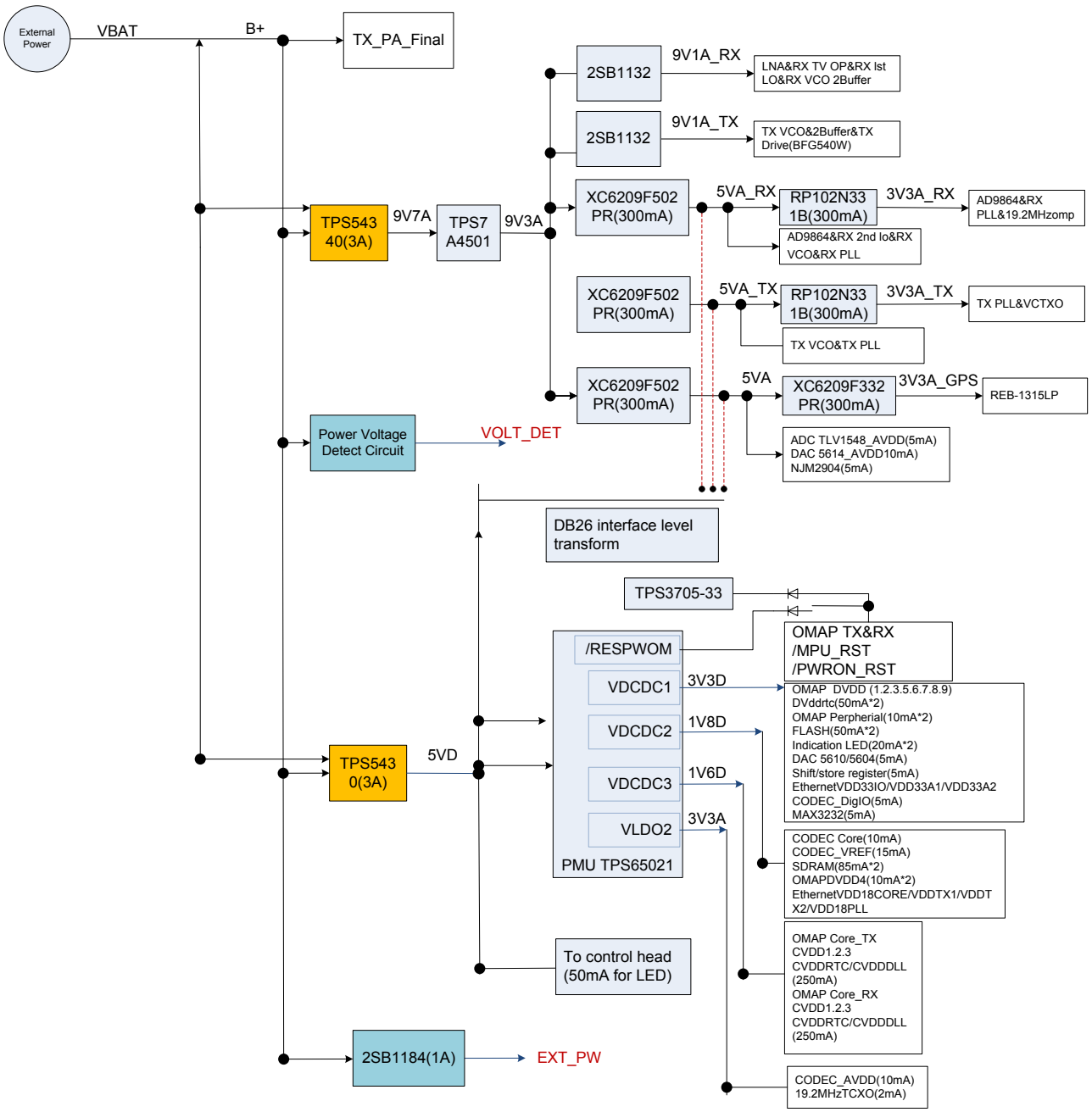
The repeater adopts two OMAPs. One is used as RX OMAP, and the other as TX OMAP. The peripheral equipment is mainly controlled by the ARM of TX OMAP. The functions of RX OMAP and TX OMAP are described below:

- RX OMAP5912
  - ARM processor: Reserved. I^2C and UART signals are reserved for option board.
  - DSP processor: to handle the algorithm of the RX baseband signal, so as to control SPI, MCBSP1 and MCBSP3.
- TX OMAP5912
  - ARM processor: to run the MMI software and part of stack software, so as to control related peripheral equipment such as UART1, UART3, USB, KEYPAD and LED indicators.
  - DSP processor: to handle the algorithm of the TX baseband signal, so as to control SPI, MCBSP1 and MCBSP3.

5.2.1 Power Supply Module

Power supply module is mainly composed of two parts.

- The power supply provides RF circuit with 9.3V through DC-DC converter and LDO. Each module of RF circuit is powered by the 9.3V through LDO again.
- The power supply provides the baseband board with 3.3v/1.8v/1.6v through DC-DC connector and PMU.



5.2.2 Control Module

Reset

When the product is powered on, the PMU will generate a reset signal “PWR_RST” to reset RX OMAP and TX OMAP. See the figure below.

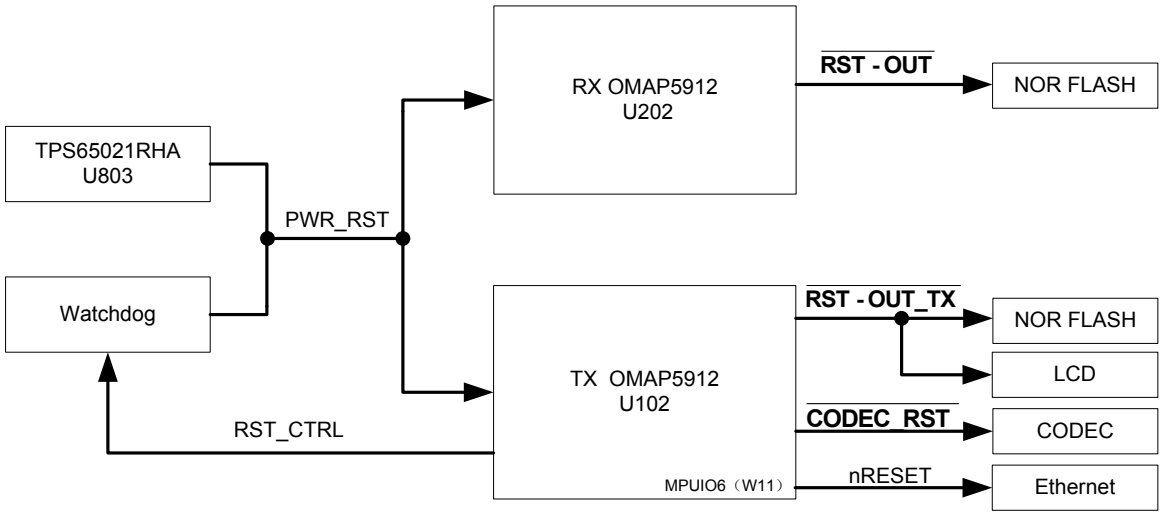


Figure 5-1 Reset Schematic Diagram

After making response to power-up reset, OMAP5912 will output $\overline{\text{RST\_OUT}}$ signal, and maintain low level for a period of time to reset the peripheral equipment (NOR Flash) of OMAP. For the CODEC chip (U501), its resetting is subject to MPUIO6 of TX OMAP. The reset sequence of OMAP5912 is shown below.

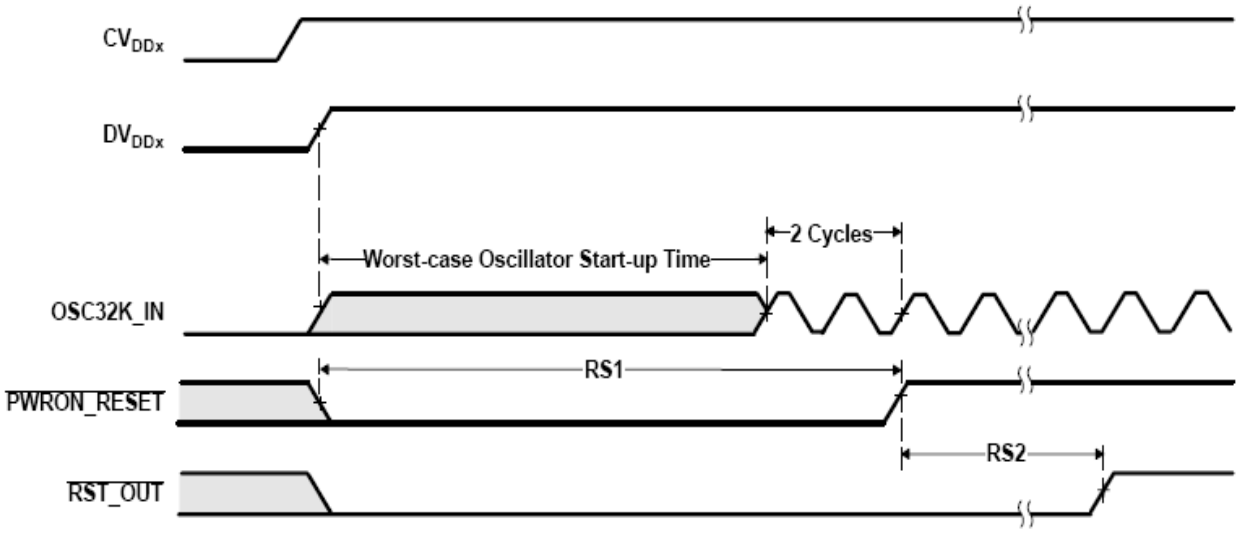


Figure 5-2 OMAP5912 Reset Sequence

Clock

OMAP5912 requires two clocks: system clock and 32K clock. The system clock is provided by the 19.2MHz TCXO, while the 32K clock is used as a special clock.

The role of ULDP (Ultra low-power device) is to manage the OMAP clock. The output clock from ULPD is connected to the appropriate external interface. OMAP is responsible for clock control, distribution, division and doubling.

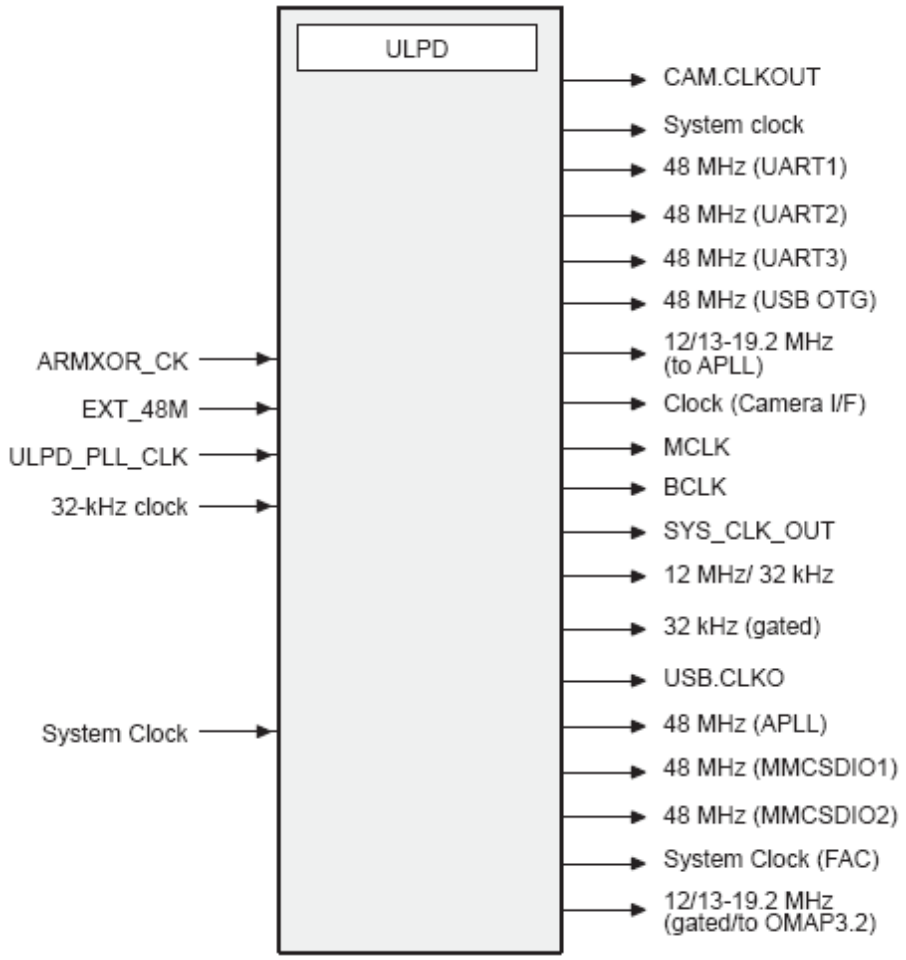


Figure 5-3 ULPD Diagram

For the built-in and external clock of OMAP2912, there are two reset modes: Reset Mode0 and Reset Mode1. Reset Mode0 is adopted for this system. As for this product, the system clock uses external clock, while the 32K clock uses built-in clock. The following diagram shows the details.

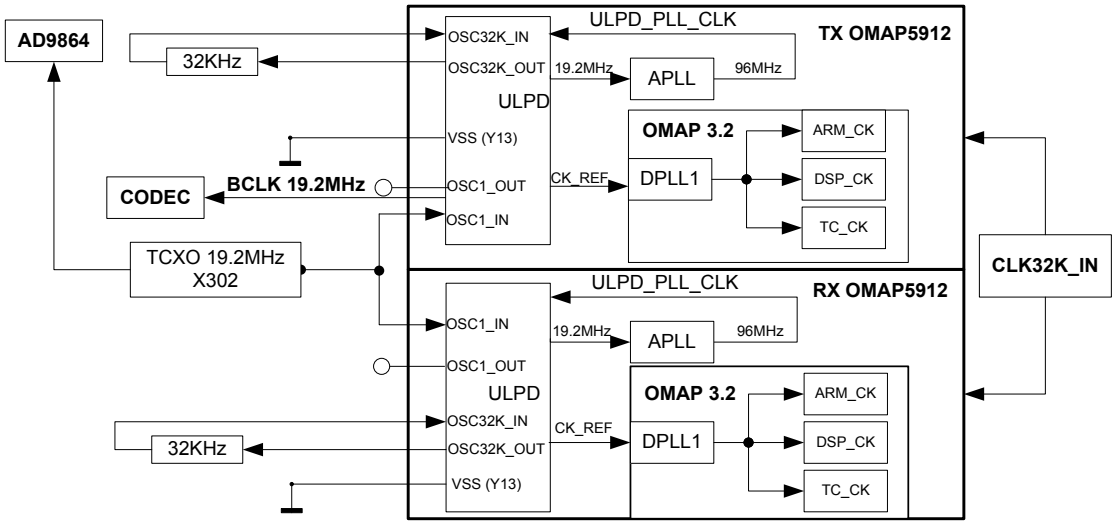


Figure 5-4 Clock Schematic Diagram

Memory

OMAP5912 provides two types of external memory interfaces: external memory interface slow (EMIFS) and external memory interface fast (EMIFF). The memory can be expanded by these two interfaces. External NOR Flash and Mobile SDRAM have been expanded for the two OMAPs in the system. Following diagram shows the details:

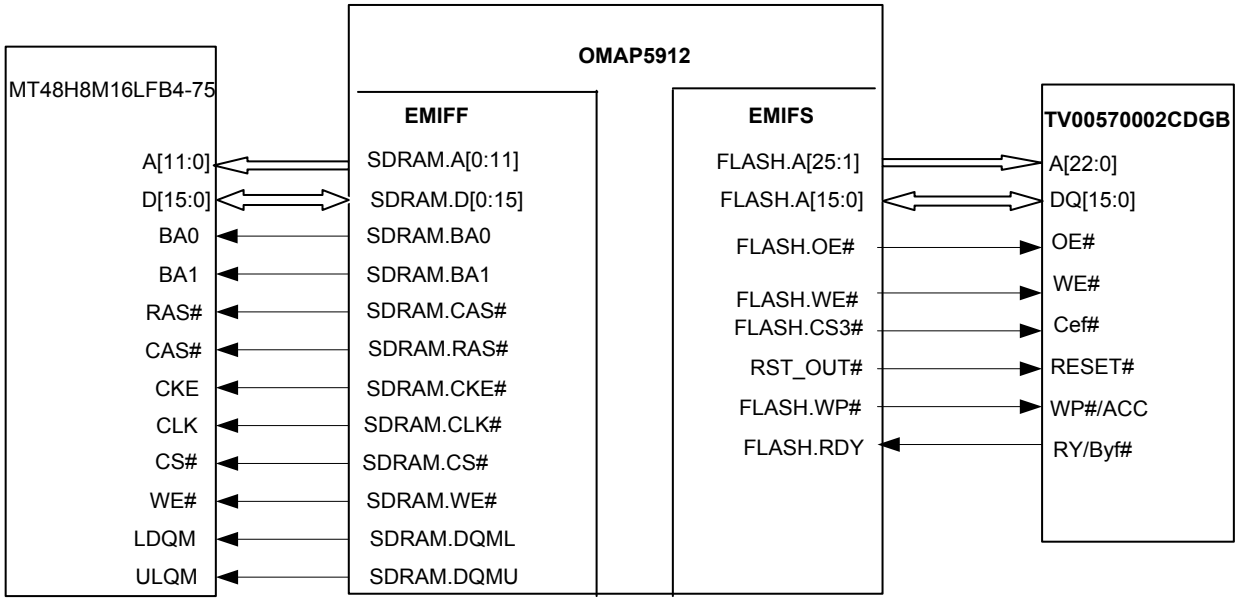


Figure 5-5 Memory Diagram

Application of OMAP

- I^2C Interface

  OMAP5912 provides one I^2C interface, and supports a communication rate of up to 400kbps. TX_OMAP I^2C Interface realizes communication with PMU. RX_OMAP I^2C module is reserved for OPTION BOARD interface. Following figure shows the connection of I^2C.

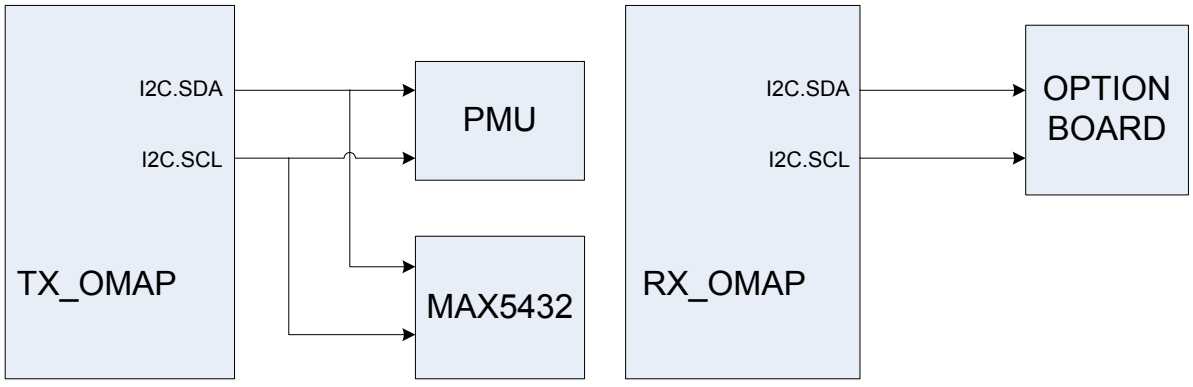


Figure 5-6 Diagram of I^2C Connection

- MCBSP Interface

With programmable internal clock generator, MCBSP uses independent clock signal and frame synchronization for transmitting and receiving to realize full-duplex data communication. OMAP5912 has three MCBSP interfaces, namely MCBSP1interface, MCBSP2 interface and MCBSP3 interface. Following figure shows the details:

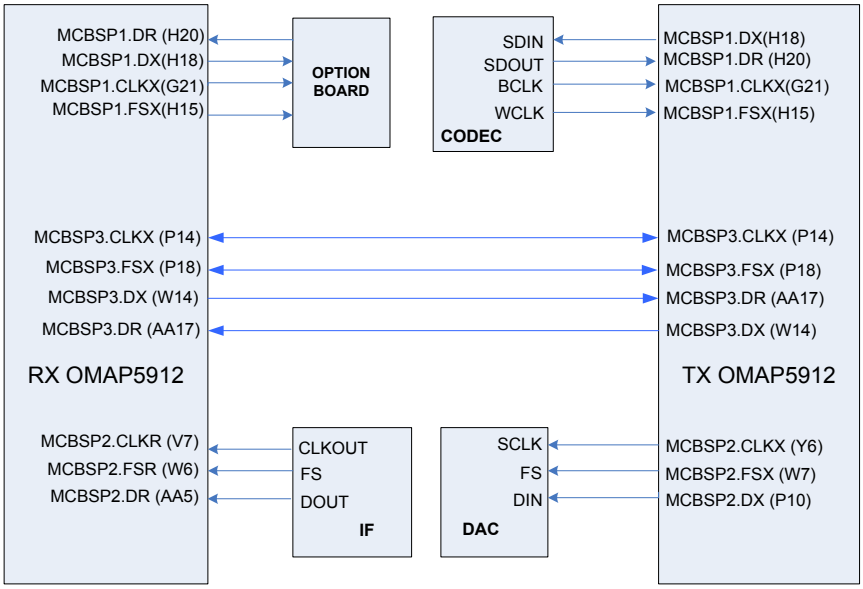


Figure 5-7 Diagram of MCBSP Interface Connection

The function of each interface is shown in the table below:

Interface Type	TX_OMAP	RX_OMAP
MCBSP1	Used to communicate with CODEC.	Reserved for option board interface.
MCBSP2	Used to connect SSI interface of TX DAC TLV5614. TLV5614 works in Slave mode and is managed by DSP.	Used to connect the SSI interface of AD9864 to receive demodulation signal from AD9864.
MCBSP3	Used to connect TX_OMAP and RX_OMAP for data exchange and transmission.	

- MCSI Interface

There are two MCSIs (Multi Channel Serial Interface) with OMAP5912.

- The MCSI1 of TX_OMAP is used by TX PLL to realize stable frequency and direct modulation.
- The MCSI1 of RX_OMAP is reserved for RX PLL to realize stable frequency and direct modulation.

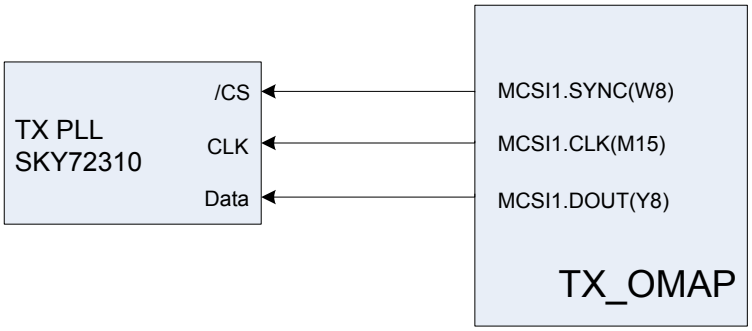


Figure 5-8 Diagram of MCSI Interface Connection

- MICROWIRE Interface

  OMAP5912 provides one MICROWIRE interface. The four chip select signals can drive four external components. The MICROWIRE interface signals include: μWIRE.CS, μWIRE.SCLK, μWIRE.SDO and μWIRE.SDI.

  For the product, only the MICROWIRE interface of TX OMAP is used to configure the internal registers of CODEC.

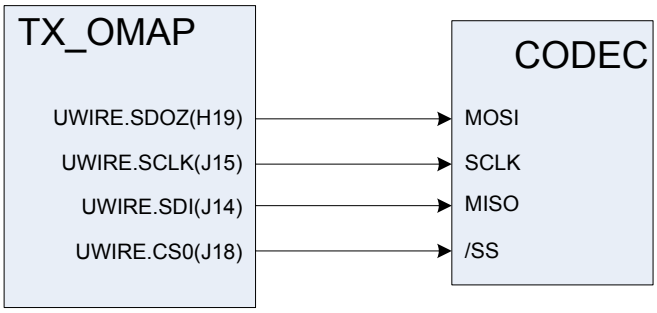


Figure 5-9 Diagram of MICROWIRE Interface Connection

- MPUIO&GPIO Interface

  OMAP5912 provides 16 MPUIOs for ARM and 64 GPIOs for ARM/DSP. Input or output function can be assigned to each GPIO/MPUIO. The interrupt input is available for the input function. Sometimes, there will be several GPIO/MPUIOs suitable for a pin. However, only one GPIO/MPUIO can be used at a time.

- SPI Interface

  SPI interface is a full-duplex four-wire interface. Devices communicate in master/slave mode, and SPI operates with individual master device and multiple slave devices. The master device controls the communications via the Shift clock signal and the enable signal of the slave devices. When the enable signal of the slave devices are valid at low level, the slave devices can receive or transmit serial signal. OMAP5912 has one SPI, which has four chip selects for connecting four external SPI components. The descriptions are as follow:

- The SPI interface of RX_OMAP is used to configure IF processor and RX PLL chip. The connection of SPI to IF processor and RX PLL is shown below.

  CS1 is used to control IF processor, which contains two data interfaces, SPI and SSI. SPI is used to configure the internal registers of IF processor and read data from the registers. SSI is used to output I/Q demodulation data and AGC data.

  CS2 is used to control RX PLL. OMAP5912 is designed as SPI Master while IF processor and RX PLL are designed as SPI Slave.

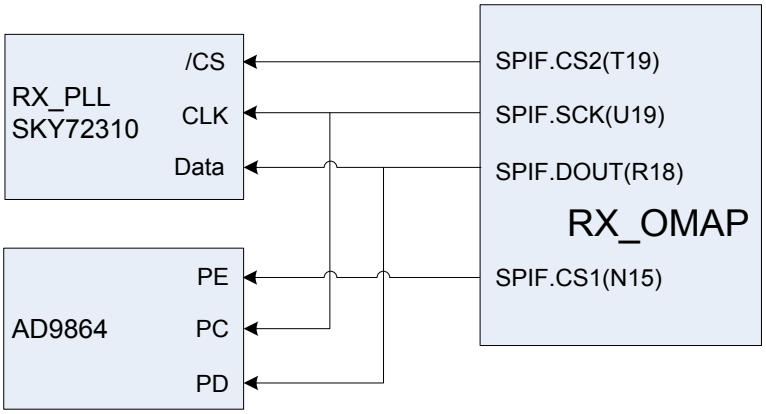


Figure 5-10 Diagram of RX_OMAP SPI Interface Connection

- The SPI interface of TX_OMAP is used to configure the RX DAC, and chip select signals is sent to CS1 of SPI. The connection of TX_OMAP SPI is shown below:

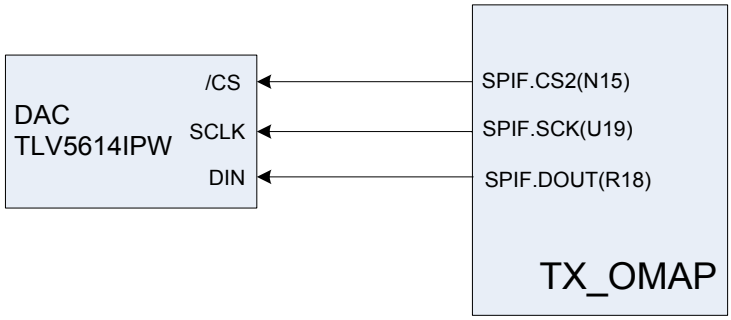


Figure 5-11 Diagram of TX_OMAP SPI Interface Connection

- UART Interface

  OMAP5912 provides three UART interfaces (UART1, UART2 and UART3), and supports hardware flow control. The maximum communication rate is 1.5Mbps.

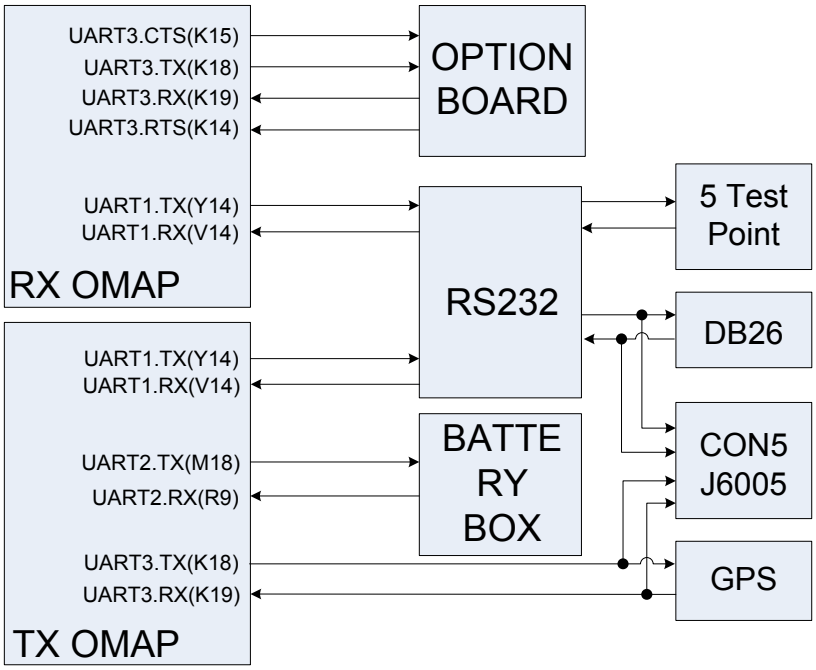
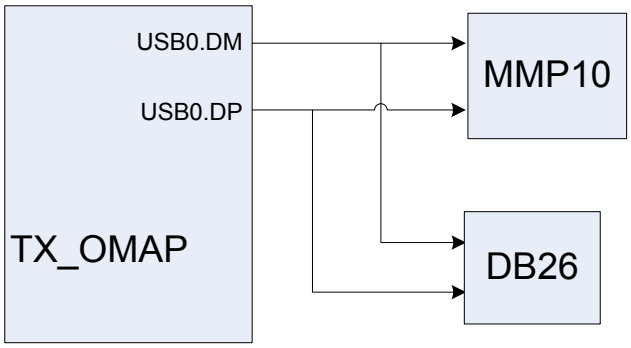


Figure 5-12 Diagram of UART Interface Connection

- USB Interface

  OMAP5912 provides three USB interfaces. Only USB0 integrating USB transceiver is used by the circuit. In compliance with USB1.1 standard, the USB can work in Host mode or Device mode with a maximum rate of 12 Mbps. The product uses the USB0 interface of TX OMAP. Following figure shows the circuit of USB0 interface:



5.2.3 Audio Module

The audio path is used to output RX audio, relay audio and input TX audio.

RX Audio Path

Via switch, TX audio signal from SPK1 and SPK2 of CODEC can be respectively output to 10PIN port and DB26 port. The way to output the TX audio signal referred above can be configured via CPS.

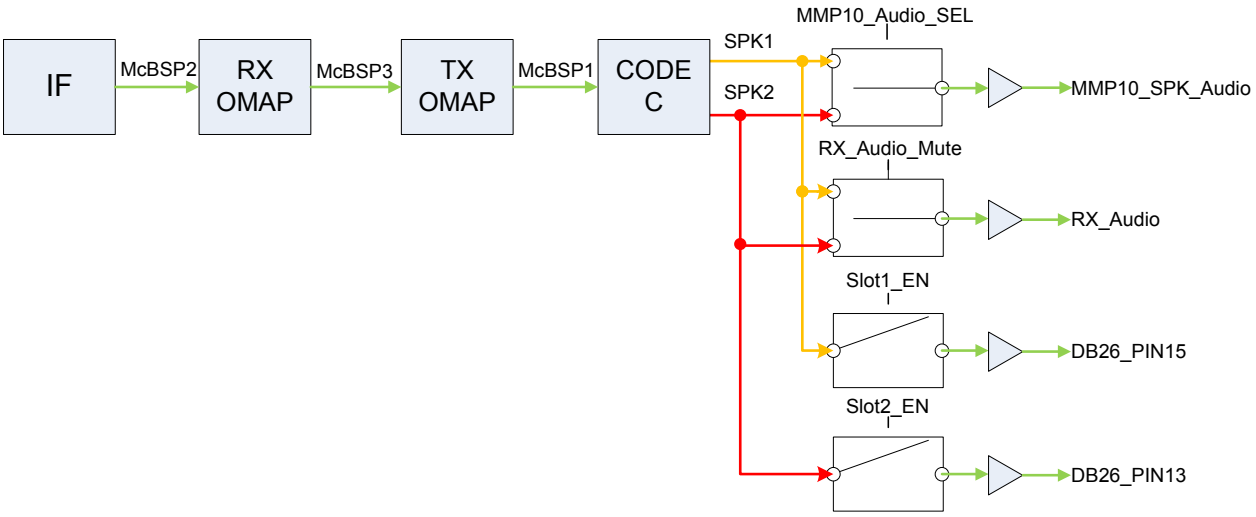


Figure 5-13 Circuit Diagram of RX Audio

Relay Audio Path

After demodulated by AD9864, relay audio in digital/analog mode goes to RX_OMAP. Then the audio is sent to TX _OMAP via McBSP3, and finally is subject to DA conversion to modulate VCO and directly modulate PLL.

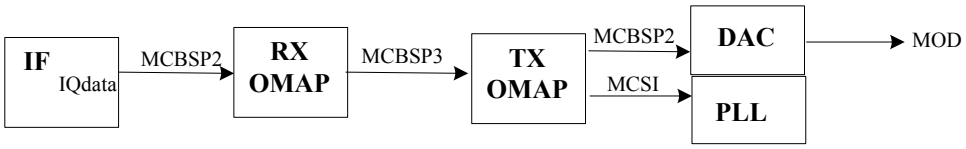


Figure 5-14 Circuit Diagram of Relay Audio

TX Audio Path

The product has two kinds of MIC audio signals: MMP10_Mic_IN and DB26_Ext_Mic_IN. MMP10_Mic_IN signal is from the accessory connected to the 10PIN interface on the front panel, while DB26_Ext_Mic_IN signal is from PIN7 of the further development interface DB26 (J7004). The EXT_MIC_CTRL signal can be configured via CPS to activate MMP10_Mic_IN or DB26_Ext_Mic_IN. Processed by CODEC, MMP10_Mic_IN or DB26_Ext_Mic_IN audio signal will be transmitted to DSP of TX_OMAP via MCBSP1 interface, and finally is subject to DA conversion to modulate PLL.

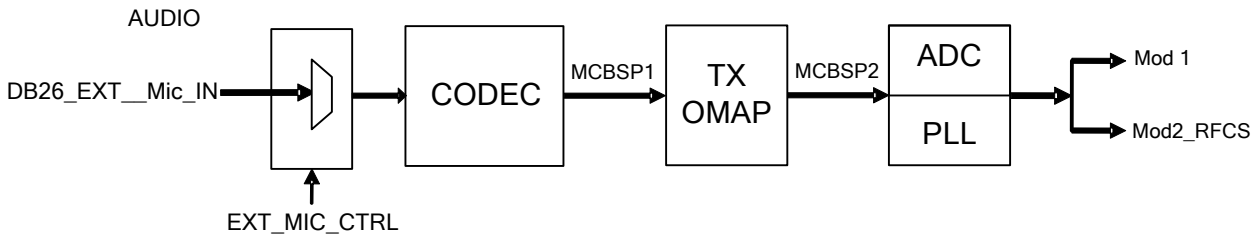


Figure 5-15 Circuit Diagram of TX Audio

5.3 RF Section

5.3.1 Transmitter Circuit

The transmitter circuit consists of a power amplifier (PA) circuit, a power control circuit, a diagnosis and detection circuit and a transmitter protection circuit.

- The power amplifier (PA) circuit is to amplify the RF signal from the exciter module to 25W. After amplification, the signal will be output via the antenna.
- The power control circuit is used to keep the RF power of the antenna at a fixed level.
- The diagnosis and detection circuit detects the current TX power, antenna VSWR and transmitter temperature, and sends the detection results to the control unit for monitoring the transmitter status.
- The protection circuit is used to protect the power amplifier from being damaged due to high temperature or VSWR.

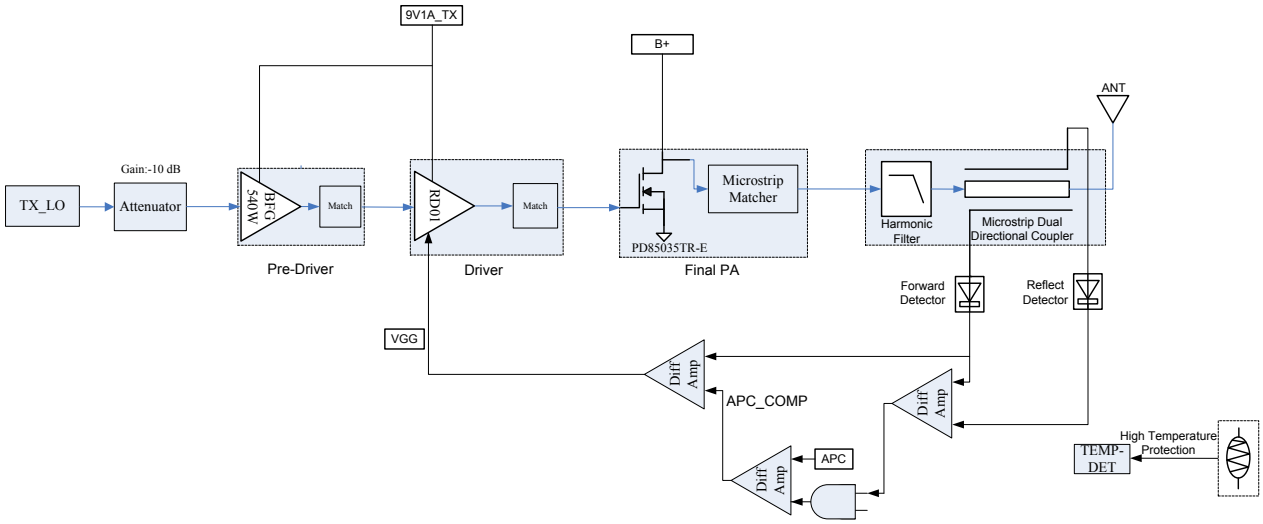


Figure 5-16 Block Diagram of PA Board

5.3.1.1 Power Amplifier

The PA circuit of transmitter is composed of a 3-stage PA unit: pre-driver stage (Q3003), driver stage (Q3002) and final stage (Q3001). The gain of Q3003 is fixed; however, the gain of Q3002 is variable under the control of APC circuit, ensuring a constant RF power output of 25W.

Pre-driver Power Amplifier

The pre-driver stage PA is an NPN transistor BFG540W (Q3003). It amplifies the RF signal from the exciter module to 17 dBm. With a fixed gain, the input/output match circuit consists of L-C low-pass matching network.

Driver Power Amplifier

The driver stage PA is an LDMOS power tube RD01 (Q3002). It further amplifies the RF signal from the pre-driver PA (Q3003) to 27 dBm. The gain of this PA is also adjustable via the output voltage (VGG) from the APC circuit.

Final Power Amplifier

The final stage PA is also an LDMOS power tube PD85015TR-E (Q3001), which is supplied by the power supply directly. The grid voltage is output from DAC, thus ensuring a fixed gain. The output match circuit of VHF consists of L-C matching network while the match circuit of UHF consists of microstrip, inductor and capacitor.

5.3.1.2 Harmonic Suppression Filter

The harmonic filter is a seven-order LPF filter comprising L3007, L3008, L3009, C3051, C3052, C3053, C3056, C3034, C3035 and C3150. It can decrease the harmonic component by increasing the out-of-band rejection capability.

5.3.1.3 Directional Coupler

The directional coupler is used to detect forward and reverse power, so as to monitor and diagnose the operating status of the transmitter. There are two purposes: 1) power can be controlled effectively through the forward detection; 2) the voltage after forward and reverse detection will be sent to U3002 for VSWR detection.

5.3.1.4 Power Control

The transmitter power is controlled by the power control circuit composed of an operational amplifier and a directional coupler. After the transmitter power passes through the directional coupler, the detected RF signal goes to Port 3 of the operational amplifier (AD8566) via the diode. After compared with APC_COMP, an error voltage (VGG) is output to control the bias voltage at RD01, and thus to achieve power control.

5.3.1.5 Temperature Protection

The temperature protection aims to detect the PCB temperature through the temperature sensor resistor which locates near the final-stage PA. When the temperature rises to the threshold value (85℃), the voltage generated by U3003 turns the diode D8014 on. After this voltage is detected, the APC output and VGG become decreased, and thus the output power is lowered. At the meantime, a high-temperature alarm appears on the LCD.

5.3.1.6 VSWR Protection

After the forward and reverse detection via directional coupler, the power is converted to voltage, which

goes to U3002 for VSWR detection. When VSWR>2:1, a voltage is output to turn the diode D3004 on, and sent for comparison with APC reference voltage provided by MCU to generate APC_COMP. Then APC_COMP is compared with forward detection voltage, so as to reduce the output voltage (VGG) and achieve VSWR protection.

5.3.2 Receiver Circuit

The receiver circuit mainly comprises the RF band-pass filter, low-noise amplifier, mixer, IF filter, IF amplifier and IF processor.

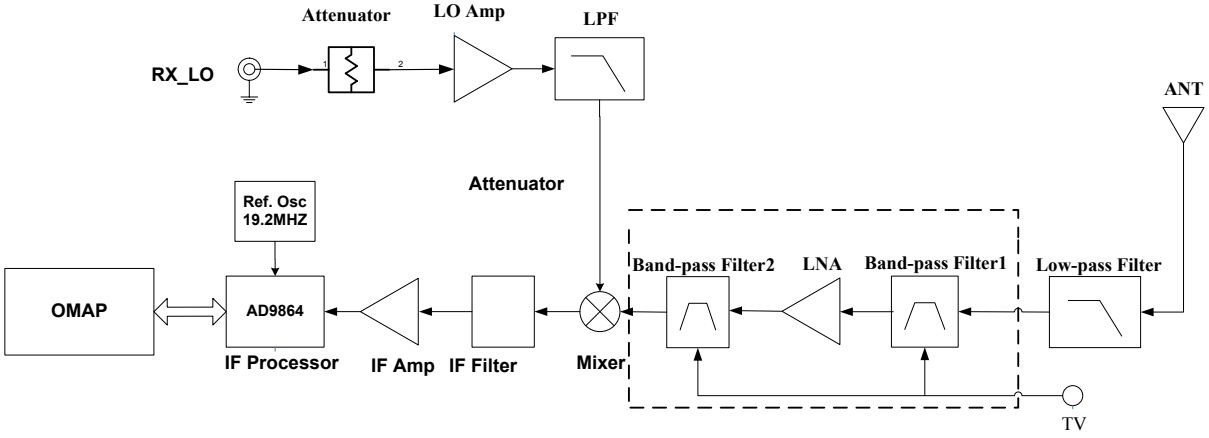


Figure 5-17 Diagram of Receiver Circuit

Receiver Front-end

The HF signal from the low-pass filter passes through the electrically tunable first-stage band-pass filter controlled via TV level, to remove out-of-band interference signal and to send wanted band-pass signal to the low-noise amplifier (Q4002). The amplified signal goes to a band-pass filter controlled via TV level, to remove out-of-band interference signal generated during amplification, and to send wanted HF signal to the mixer.

The wanted signal passes through the RF band-pass filter and low-noise amplifier and goes to the mixer (D4007). Meanwhile, the first local oscillator (LO) signal generated by VCO passes through the low-pass filter and also goes to the mixer (D4007). In the mixer, the wanted signal and the first LO signal are mixed to generate the first IF signal (73.35MHz for UHF and 44.85MHz for VHF). Then the signal passes through the frequency selection network composed of LC, to suppress carriers other than the first IF signal, and to increase the isolation between the mixer and the IF filter. After that, the first IF signal is processed by the crystal filter (Z4001), and is sent to the two-stage IF amplifier circuit for amplification. Then the amplified signal goes to the IF processor AD9864 (U5001) for processing.

Receiver Back-end

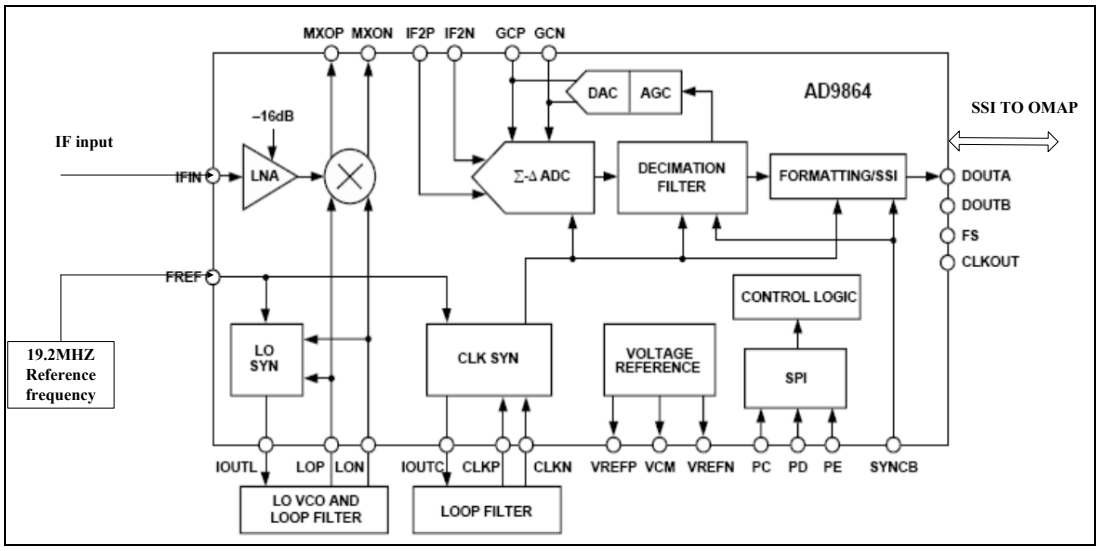


Figure 5-18 Diagram of IF Processor

The first IF signal (58.05MHz) output by the IF amplifier goes into AD9864 (U5001) via Pin 47, where it is down-converted to a second IF signal (2.25MHz). Then the second IF signal is converted to a digital signal via ADC sampling, and output via the SSI interface. Finally, the digital signal is sent to the DSP (OMAP5912) for demodulation.

AD9864 employs reference frequency of 19.2MHz and shares the crystal with the OMAP. The second LO VCO is comprised of an oscillator, a varactor and some other components, to provide the 71.1/75.6 MHz LO signal for UHF and 47.1/42.6 MHz LO signal for VHF. The 18 MHz clock frequency is generated by the LC resonance loop.

5.3.3 Frequency Generation Unit (FGU)

The transceiver has two FGUs: RX FGU and TX FGU. The RX FGU provides the first LO frequency for the RX system, while the TX FGU provides carrier and excitation signal for the TX system. They work simultaneously, but are locked at different frequencies.

Both the RX FGU and TX FGU mainly consist of a reference crystal oscillator, a PLL, a VCO and a buffer amplifier. The PLL data is configured via OMAP. The TX FGU further comprises a modulation circuit (MOD_H). See the figure below.

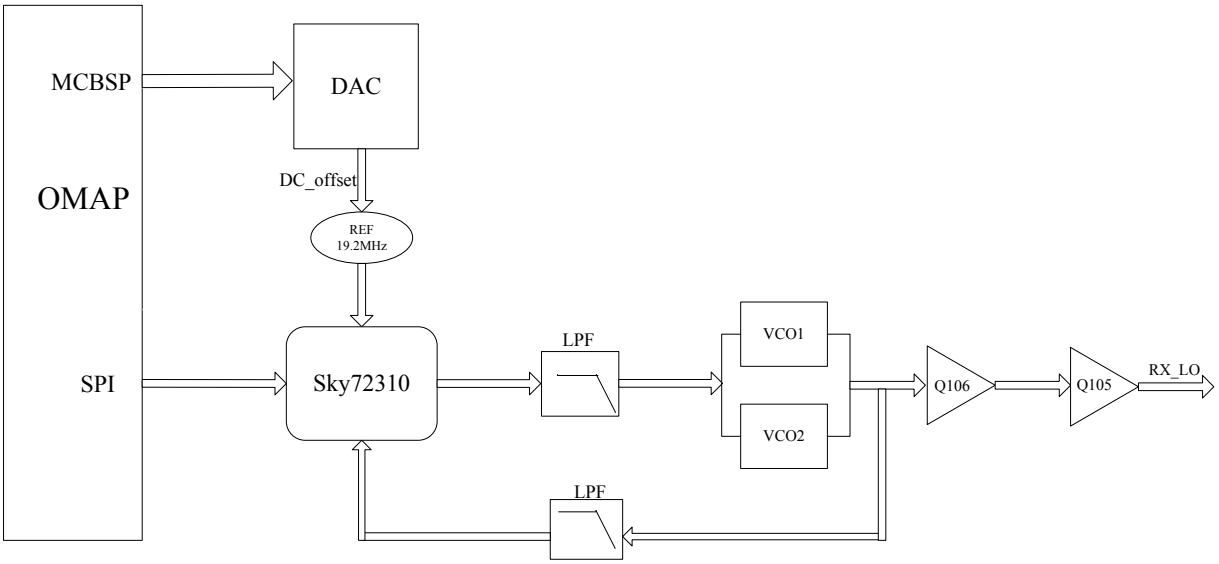


Figure 5-19 Block Diagram of RX FGU

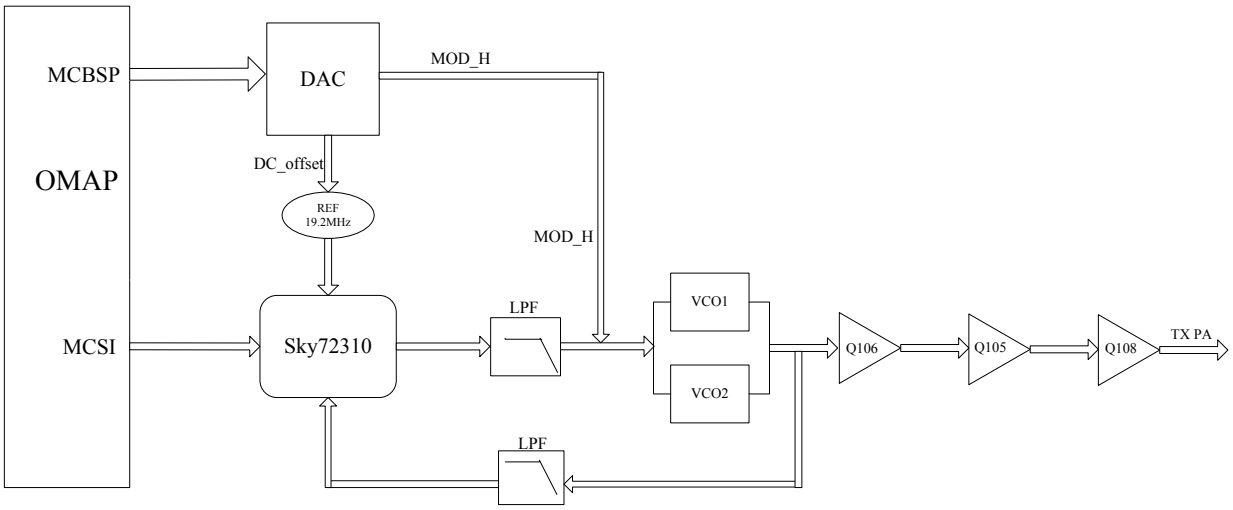


Figure 5-20 Block Diagram of TX FGU

Reference Crystal Oscillator

The reference crystal oscillator is a temperature compensated crystal oscillator with a frequency of 19.2 MHz. You can control the reference crystal oscillator by adjusting the DC voltage output by the digital-to-analog converter (DAC), so as to ensure frequency accuracy.

PLL IC

The PLL IC is a fractional frequency divider (Sky72310), which consists of the pre-divider, programmable divider, phase detector, charge pump, SPI (MCSI) control interface and etc. The voltage for the analog circuit and digital circuit of the PLL IC is 3.3 V, while the voltage for the charge pump is 5 V. See the figure below.

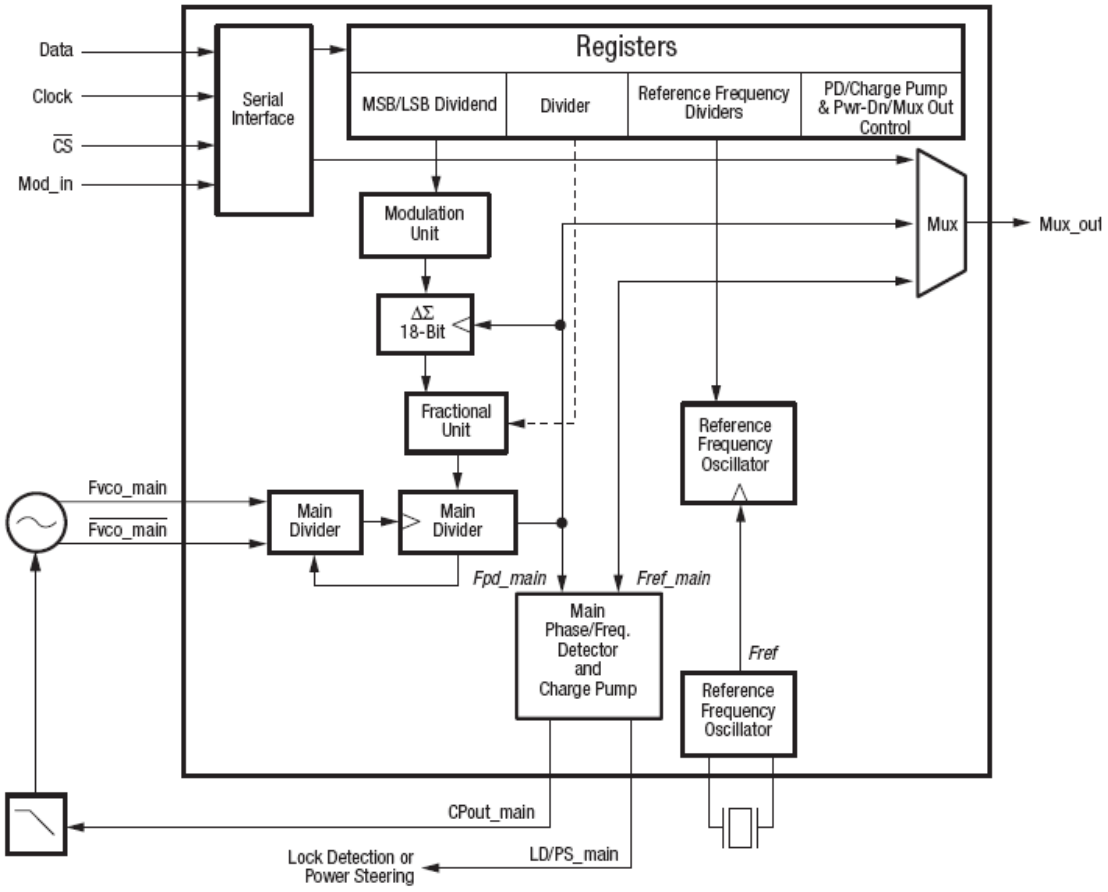


Figure 5-21 Block Diagram of PLL IC

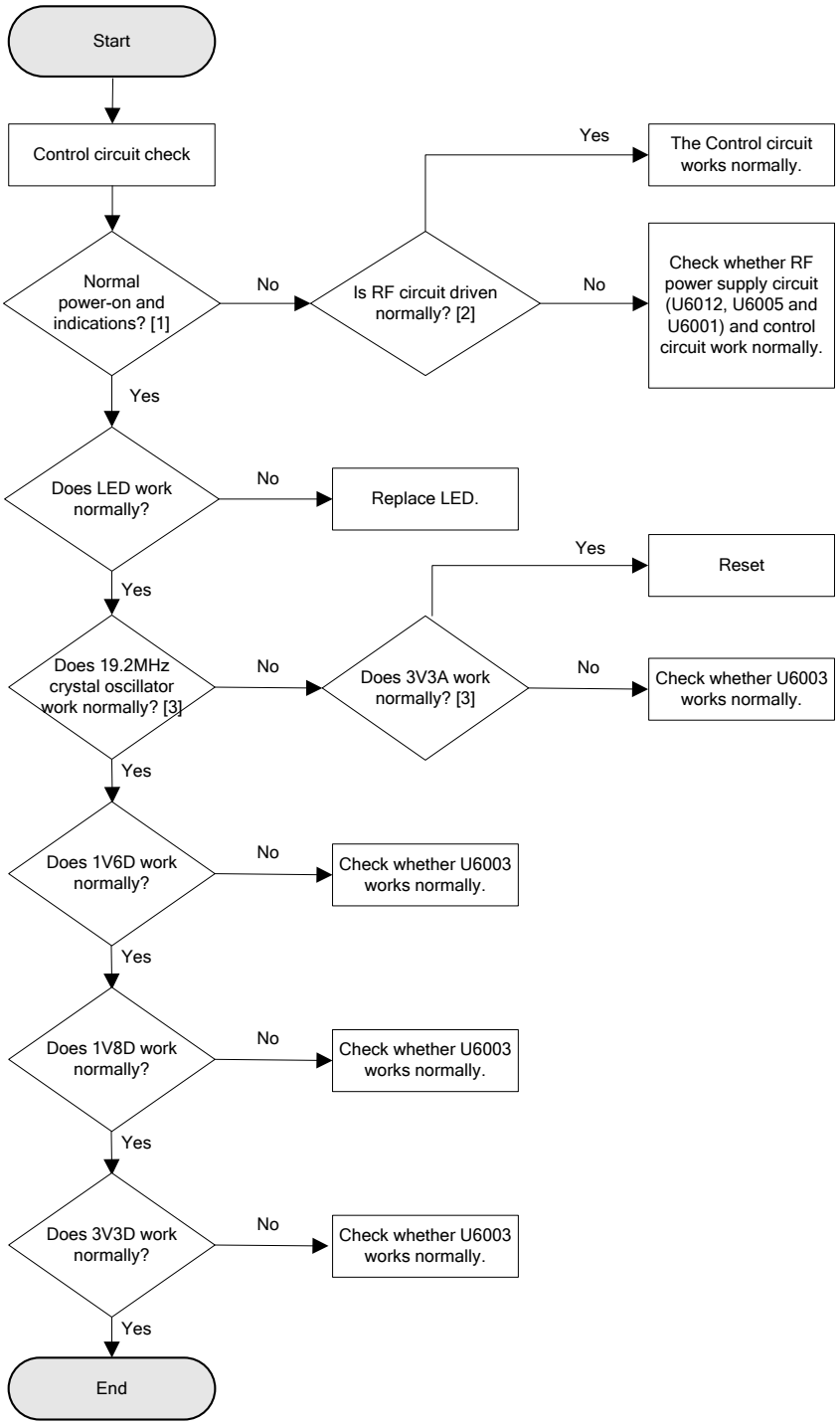
Sky72310 is mainly used to generate an accurate frequency according to data transmitted from the baseband OMAP. The 19.2 MHz frequency generated by reference crystal oscillator goes into PLL IC where it is divided to generate a reference frequency. The frequency generated by VCO goes into PLL IC where it is divided to generate a frequency. The generated frequency is compared with the reference frequency in the phase detector (PD) and converted into a DC level CV voltage, so as to control and adjust the output frequency of VCO, thus locking the frequency. Moreover, the PLL IC is also an important part of the modulation circuit. The MCSI interface of OMAP transfers data to PLL IC directly to perform modulation.

VCO

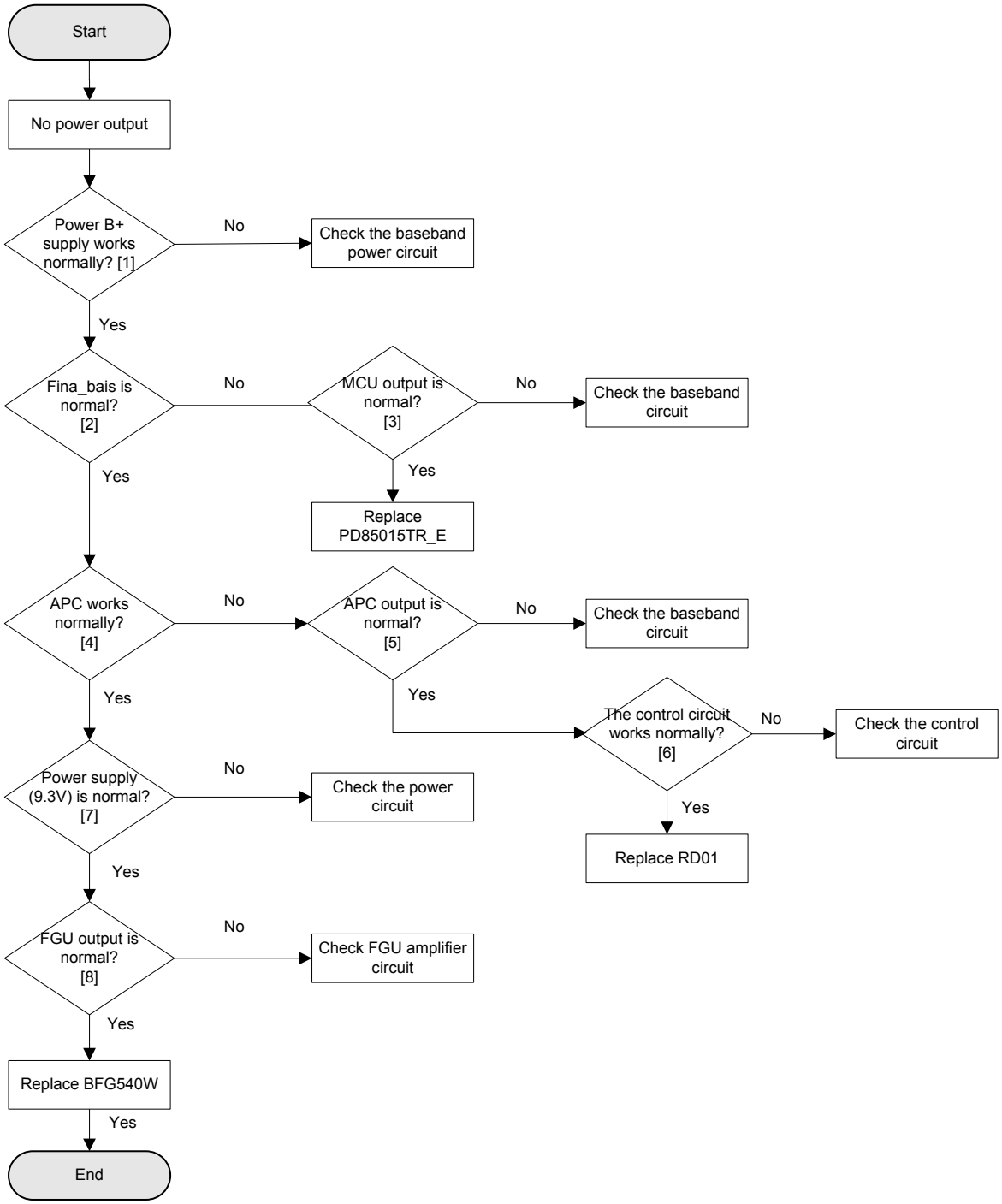
- The VCO for RX unit is comprised of a transistor (Q2011 or Q2014), varactors and four Colpitts oscillator circuits. Q2012 is the buffer amplifier of RX unit.
- The VCO for TX unit is comprised of a transistor (Q2003 or Q2007), varactors and four Colpitts oscillator circuits. Q2005 is the buffer amplifier of TX unit.

6. Troubleshooting Flow Chart

6.1 Control Circuit



6.2 Transmitter Circuit

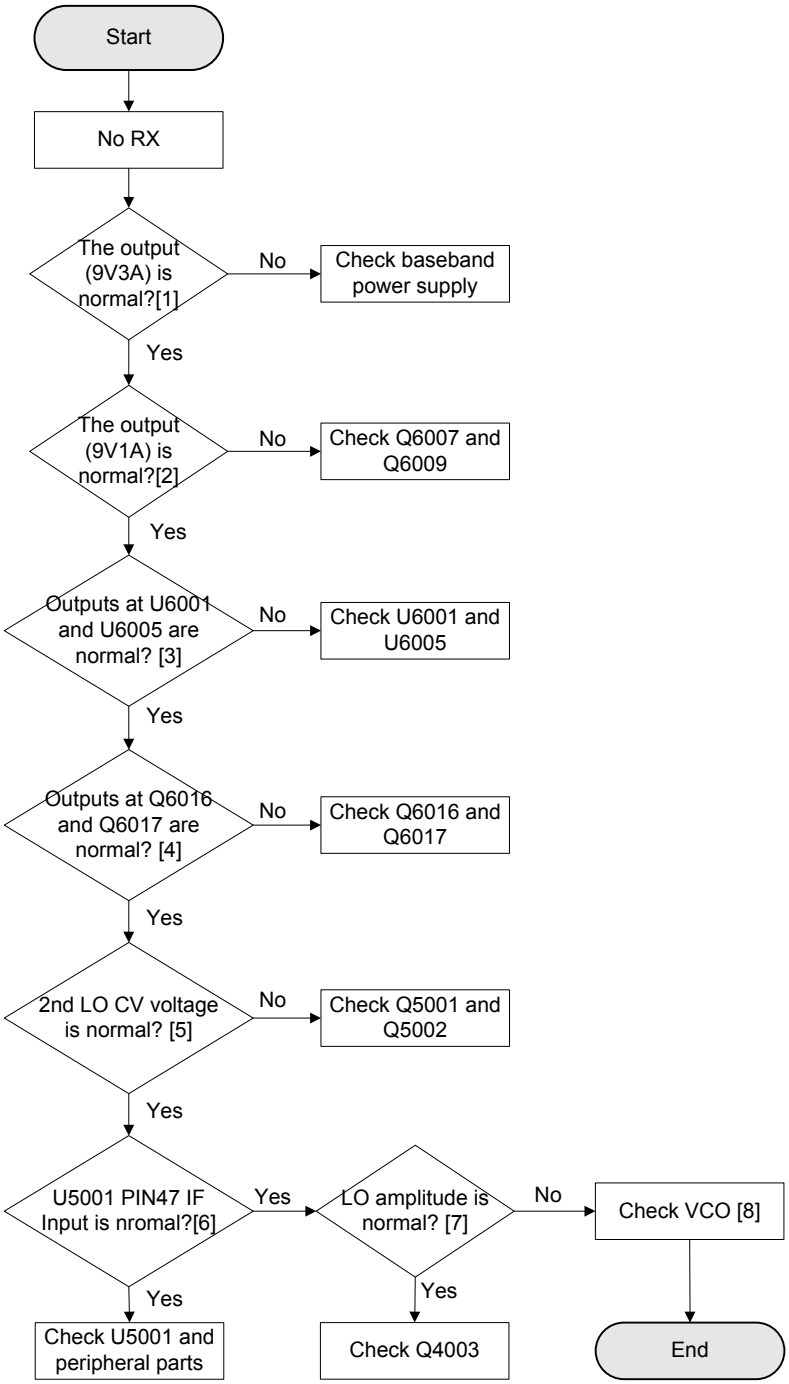


Description of Normal Situations:

- [1] Check whether the power supply for the final-stage power amplifier is 13.6 V if the PA does not output power.
- [2] The normal Fina_bais voltage is 3 V. If there is no Fina_bais voltage in the event of high power, check whether the MCU output is normal.

- [3] If there is no MCU output, check whether the baseband circuit is normal. If yes, it indicates that the baseband does not output the bias voltage and the amplifier is damaged. In this case, please replace PD85015TR_E.
- [4] When the PA works normally, the APC voltage is used to control the bias voltage of RD01. The voltage is about 2.8 V in the event of high power.
- [5] The baseband can provide an APC reference voltage under the normal condition.
- [6] The baseband circuit provides the APC reference voltage. The difference between the APC reference voltage and the forward voltage is amplified by the control circuit to generate the error voltage VGG, to control the gain of RD01. If the VGG voltage is available, it indicates that RD01 is damaged and need to be replaced. If there is no VGG voltage, please check the control circuit.
- [7] Check whether the power supply (9.3 V) that supplies the RD01 and BFG540W is normal.
- [8] Under the normal condition, the FGU outputs signal (10 to 12 dBm). If not, check the FGU amplifier circuit. If yes, the amplifier BFG540W may be damaged. In this case, replace it.

6.3 Receiver Circuit

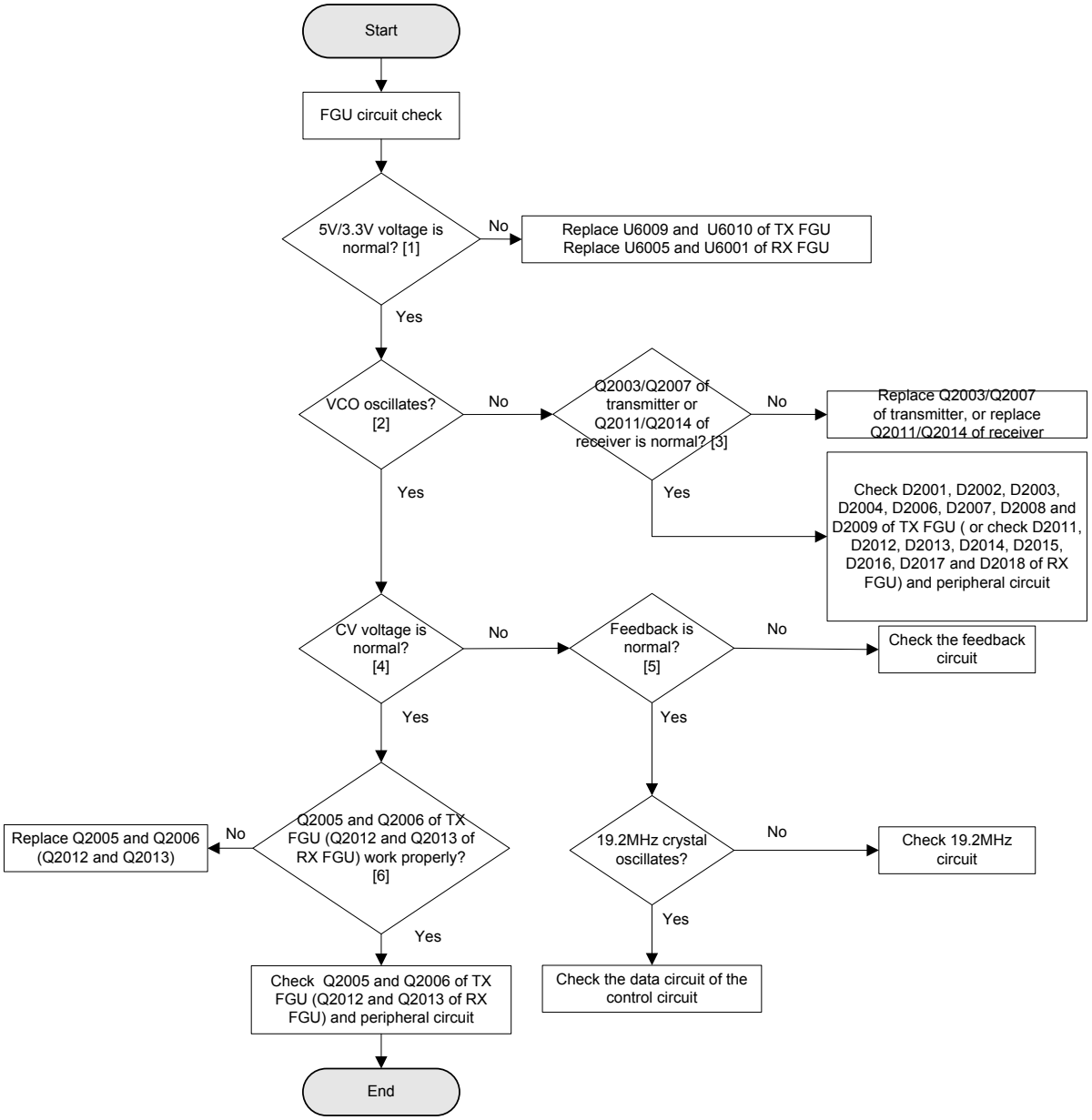


Description of Normal Situations:

- [1] The power supply for RX board is about 9.3 V.
- [2] Voltage at Pin 2 of Q6007 is about 9.1 V, and voltage at Pin 2 of Q6016 is about 5 V.
- [3] Output voltage at Pin 5 of U6001 is about 3.3 V, and output voltage at Pin 5 of U6005 is about 5 V.

- [4] The normal second LO CV voltage tested at TP5004 is 0.8 to 1.3V.
- [5] Cut off the front-end circuit, and input an IF signal (73.35 MHz for UHF and 44.85 MHz for VHF) from Pin 47 of U5001. The sensitivity is about -107 dBm.
- [6] The first LO signal amplitude is 17 to 20 dBm.

6.4 FGU Circuit

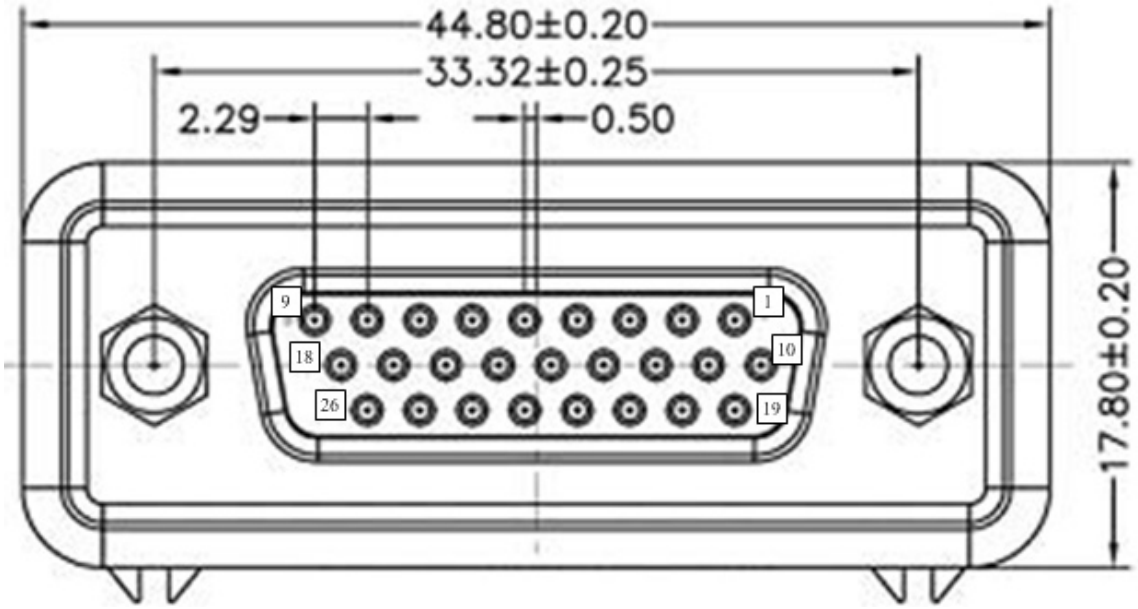


Description of Normal Situations:

- [1] The power supply for the VCO and PLL is 5 V and 3.3 V respectively.
- [2] At the transmitting end, frequency output for low VCO is 400 to 434.9875 MHz, and for high VCO is 435 to 470 MHz; at the receiving end, frequency output for low VCO is 326.65 to 361.6375MHz, and for high VCO is 361.65 to 396.65 MHz. The power output for these four VCOs is -8 to 8 dBm.
- [3] The voltage at the collector of Q2003, Q2007, Q2011 and Q2014 is about 4 V; the difference between the base voltage and emitter voltage is about 0.6 V.
- [4] The normal CV voltage is 0.6 to 4.4 V.
- [5] The feedback amplitude from the VCO to the PLL is from -17 to -8 dBm.
- [6] The voltage at the collector of Q2005, Q2006, Q2012 and Q2013 is about 6 V; the difference between the base voltage and emitter voltage is about 0.6 V.

7. Interface Definition

7.1 26PIN MAP Interface on Front Panel



The DB26 (ACCY CONN) interface serves as the further development interface on the front panel. The definition of each pin is described as below:

Pin	Name	Type (For repeater)	Electrical Performance	Description
1	RS232_TOUT	Digital output	RS232 level signal	RS232 serial data output
2	GND	Ground (digital)	-	-
3	DB26_GPIO4	GPIO	5V TTL	GPIO. The function is subject to CPS settings.
4	SWB+	Power output	13.2V±15%; output current ≤1A	-
5	NC	-	-	-
6	MIC_GND	Ground (analog)	-	-

Pin	Name	Type (For repeater)	Electrical Performance	Description
7	Tx Audio	Analog signal input	Vrms=80mV±10%@1KHz 60% system max. deviation DC=9.3 V	External MIC signal input. The function is subject to CPS settings.
8	RX Audio	Analog signal output	Load impedance>1KΩ Vrms=800mV±10%@1KHz 60% system max. deviation	RX filter/flat audio output. The audio output type is subject to CPS settings.
9	GND	Ground (analog)	-	-
10	D+	USB0 data cable+	USB data	When this pin is used for USB, USB of MMP10 will be disabled.
11	GND	Ground (digital)	-	-
12	DB26_GPIO2	GPIO	5V TTL	GPIO. The function is subject to CPS settings.
13	ACC_IO2	Digital input	5V TTL	Accessory identification interface. The function is reserved.
14	PROM IN	Digital input	5V TTL	Not defined
15	ACC_IO3	Digital input	5V TTL	Accessory identification interface. The function is reserved.
16	DB26_PTT_IN	Digital input	5V TTL	Programmable input pin (**PTT** key by default) valid for low level; configurable via CPS.
17	GND	Ground (digital)	-	-

Pin	Name	Type (For repeater)	Electrical Performance	Description
18	RS232_RIN	Digital signal input	RS232 level signal	RS232 serial data input
19	D-	USB0 data cable-	USB data	When this pin is used for USB, USB of MMP10 will be disabled.
20	DB26_GPIO3	Digital input/output	5V TTL	GPIO. The function is subject to CPS settings.
21	GND	Ground (digital)	-	-
22	DB26_GPIO5	Digital input/output	5V TTL	GPIO. The function is subject to CPS settings.
23	DB26_GPIO6	Digital input	5V TTL	General input interface. The function is subject to CPS settings.
24	SlotA_Audio	Analog output	Load impedance>1KΩ Vrms=800mV±10%@1KHz 60% system max. deviation	1. Audio output of RX Slot A; 2. Select digital mode via CPS
25	SlotB_Audio	Analog output	Load impedance>1KΩ Vrms=800mV±10%@1KHz 60% system max. deviation	1. Audio output of RX Slot B; 2. Select digital mode via CPS
26	RSSI	Analog output	0 to 5V DC	RSSI indication output. The function is reserved.

7.2 RJ45 (female) Interface on Front Panel

RJ45 (ETHERNET), a TCP/IP interface, is used to realize many functions such as Remote Monitor. The definition of each pin is described as below:

Pin	Type (For repeater)	Electrical Performance	Description

Pin	Type (For repeater)	Electrical Performance	Description
1	TX data+	-	-
2	TX data-	-	-
3	RX data+	-	-
6	RX data-	-	-
4, 5, 7, 8	NC	-	-

7.3 TX/ANT Interface on Rear Panel

TX/ANT interface is an N type female interface for TX antenna connection. The definition of each pin is described as below:

Pin	Type (For repeater)	Electrical Performance	Description
1	TX or antenna interface	Output/RX or TX of antenna signal	Impedance: 50 Ω

7.4 RX Interface on Rear Panel

RX interface is an N type female interface for TX antenna connection. The definition of each pin is described as below:

Pin	Type (For repeater)	Electrical Performance	Description
1	RX interface	Input	Impedance: 50 Ω

7.5 AC Power Supply Interface on Rear Panel

AC power supply interface is a 3PIN interface. The definition of each pin is described as below:

Pin	Type (For repeater)	Electrical Performance	Description
1	L (Live wire)	Input	Max input voltage range: 90 to 240 V.
2	N (Neutral wire)	-	-
3	E (Earth wire)	-	-

7.6 Battery Interface on Rear Panel

Battery interface is a 2Pin interface. The definition of each pin is described as below:

Pin	Type (For repeater)	Electrical Performance	Description
1	Power supply	Input/output	When there is no AC power supply, this pin is for lead-acid battery input; When there is AC power supply, this pin is used to output a voltage of 13.2V±1% to charge the battery.
2	Ground (power supply)	-	-

7.7 Interfaces Located between Internal Front Panel and Main Board

Pin	Type (For repeater)	Electrical Performance	Description
1	Power LED Indicator	1.9V±1%	Indicates that the operating voltage is normal.
2	Digital Channel LED Indicator	2.9V ±1%	Indicates that the repeater works on digital channel.
3	Analog Channel LED Indicator	2V±1%	Indicates that the repeater works on analog channel.
4	Slot A TX LED Indicator	1.9V±1%	Indicates that the repeater transmits in Slot A.
5	Slot A RX LED Indicator	2.9V±1%	Indicates that the repeater receives in Slot A.
6	Slot B TX LED Indicator	1.9V±1%	Indicates that the repeater transmits in Slot B.
7	Slot B RX LED	2.9V±1%	Indicates that the repeater

Pin	Type (For repeater)	Electrical Performance	Description
	Indicator		receives in Slot B.
8	Alarm LED Indicator	1.9V±1%	The Alarm LED indicator will glow when the following situations occur: abnormal VSWR, operating voltage being too high or too low, operating temperature being too high, TX Unlock, RX Unlock, fan failure, abnormal forward power, etc.
9	Power Supply	5V	Operating voltage of front panel.
10	Ground (analog)	Ground (analog)	Ground (analog)

8. Tuning Description

8.1 Required Test Instruments

- Radio test sets: Aeroflex 3920 and HP8921
- 3A/10V power supply
- Multimeter
- Tuner software

8.2 Tuning Process

8.2.1 Tuning a Repeater

After the repeater is reassembled, it must be tuned via the Tuner software.

The specific operations are described in the table below.

Items	Method
TX Section	
Reference Oscillator Warp	1. Connect the antenna connector of the repeater to HP8921, and set HP8921 to TX test mode. 2. Open the Tuner software, go to “TUNE_DATA -> TX” and double click “Reference Oscillator Warp” from the navigation tree on the left. Then click the “Transmit On” button. 3. Observe the frequency displayed on HP8921, and adjust the vernier until the frequency offset is less than or equal to 40Hz. 4. Click the “Transmit Off” button. 5. Click the “Save” button to save your settings.
Transmit Power Calibration	1. Connect the antenna connector of the radio with HP8921, and set HP8921 to TX test mode. 2. Open the Tuner software, go to “TUNE_DATA -> TX” and double click “Transmit Power Calibration” from the navigation tree on the left. Then select an appropriate channel. 3. Click the “Transmit On” button. 4. Adjust the power to the required level as described below:

Items	Method
	L：1.2±0.1W H：25±0.5W 5. Click the “Save” button to save your settings.
Transmit-to-Deviation	1. Connect the antenna connector of the repeater to HP8921, and set HP8921 to TX test mode. 2. Set the HP8921 parameters as follows: IF Filter：230kHz Filter1：<20Hz HPF Filter2：<15kHz LPF De-Emphasis：OFF 3. Open the Tuner software, go to “TUNE_DATA -> TX” and double click “Transmit-to-Deviation” from the navigation tree on the left. Then click the “Transmit On” button. 4. Observe the frequency deviation displayed on HP8921, and adjust the vernier on Tuner until the frequency deviation is 5k±50Hz. 5. Click the “Transmit Off” button. 6. Click the “Save” button to save your settings.
Modulation Balance	1. Connect the antenna connector of the repeater with HP8921, and set HP8921 to TX test mode. 2. Set the HP8921 parameters as follows: IF Filter: 230 kHz Filter1: <20 Hz HPF Filter2: <15 kHz LPF De-Emphasis: OFF 3. Open the Tuner software, go to “TUNER_DATA -> TX” and double click “Modulation Balance” from the navigation tree on the left. Then select an appropriate channel. 4. Click the “Transmit On” button. 5. Adjust the value in the dialog box until the frequency deviation displayed

Items	Method
	on HP8921 is 5k±50Hz. 6. Press the Enter key on the keyboard to confirm your settings if the value is input via the keyboard. If the value is adjusted via the vernier, skip this step. 7. Click the “Transmit Off” button. 8. Click the “Save” button to save your settings.
RX Section	
Front-end Filter	1. Connect the antenna connector of the repeater to HP8921. 2. Connect the Audio Out port of the repeater with the Audio In port of HP8921, and set HP8921 to RX test mode. 3. Set the HP8921 parameters as follows: Output RF signal: -118 dBm/Frequency (current channel frequency) Modulation frequency: 1 KHz Modulation deviation: 3 KHz De-Emphasis：750 us 4. Observe the value displayed on the HP8921 and adjust the vernier until the SINAD value is more than 14 dB. 5. Set the HP8921 parameters as follows: Output RF signal: -25 Bm/(current channel frequency: -36.675 MHz) 6. Observe the value displayed on the HP8921 and adjust the vernier until the SINAD value is less than 14dB. 7. Press the **Enter** key on the keyboard to confirm your settings if the value is input via the keyboard. If the value is adjusted via the vernier, skip this step. 8. Click the “Save” button to save your settings.
Front-end Gain	1. Connect the antenna connector of the repeater to HP8921, and set HP8921 to RX test mode. 2. Set the HP8921 to output -70dBm/Frequency (current channel frequency) unmodulated RF signal.

Items	Method
	3. Press the **Enter** key on the keyboard to confirm your settings if the value is input via the keyboard. If the value is adjusted via the vernier, skip this step. 4. Click the “Save” button to save your settings.

8.2.2 Test a Repeater

After tuning the repeater, it is required to test the digital RF signal.

Transmitting

Step 1 Open the Tuner software and go to “TEST -> TX”, and double click “Transmit BER (0.153)” from the navigation tree on the left to open Transmit BER (0.153) interface.

Step 2 Click the “Transmit On” button.

Step 3 Set the Aeroflex 3920 as follows:

- Freq: Be consistent with the frequency to be tested.
- STD IB 511(.153)
- View all items on the Aeroflex 3920.
- Frequency Error ≤ 100 Hz
- Transmit Power: 1 W
- FSK Error ≤ 5%
- Magnitude Error ≤ 1%

Receiving

Step 1 Open the Tuner software and go to “TEST -> RX”, and double click “Receiver BER (0.153)” from the navigation tree on the left to open Receiver BER (0.153) interface.

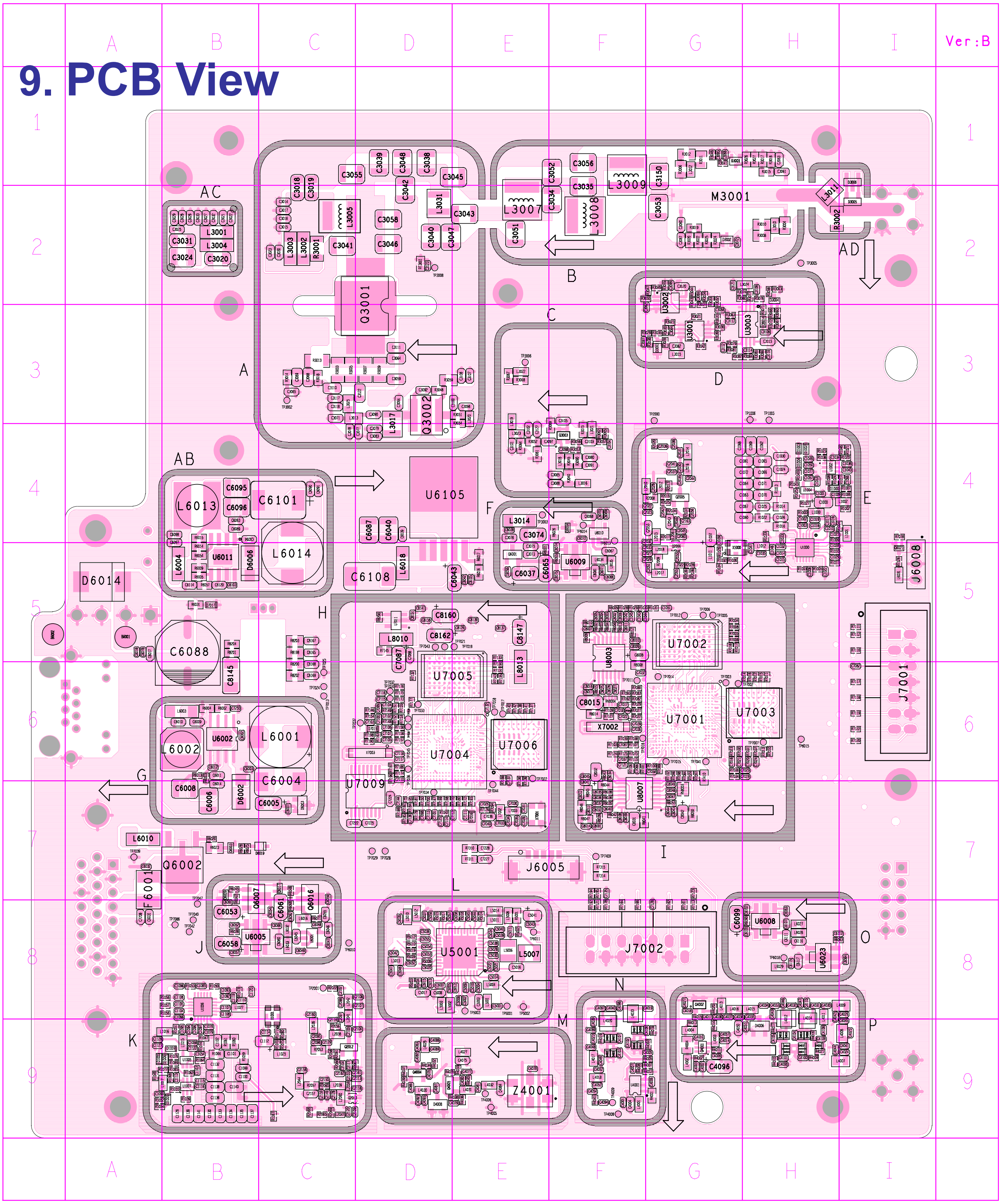
Step 2 Set the Aeroflex 3920 as follows:

- Freq: Be consistent with the frequency to be tested.
- STD IB 511(.153)
- Lvl: -116.0dBm

Step 3 Click the “Start” button.

Step 4 The average error rate is less than or equal to 5%.

9. PCB View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Ver:B
1 2 3 4 5 6 7 8 9
AC
A
AB
AD
B
C
D
E
F
G
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J
K
L
M
N
O
P
Q3001
Q3002
M3001
L3001
L3004
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L3009
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L6014
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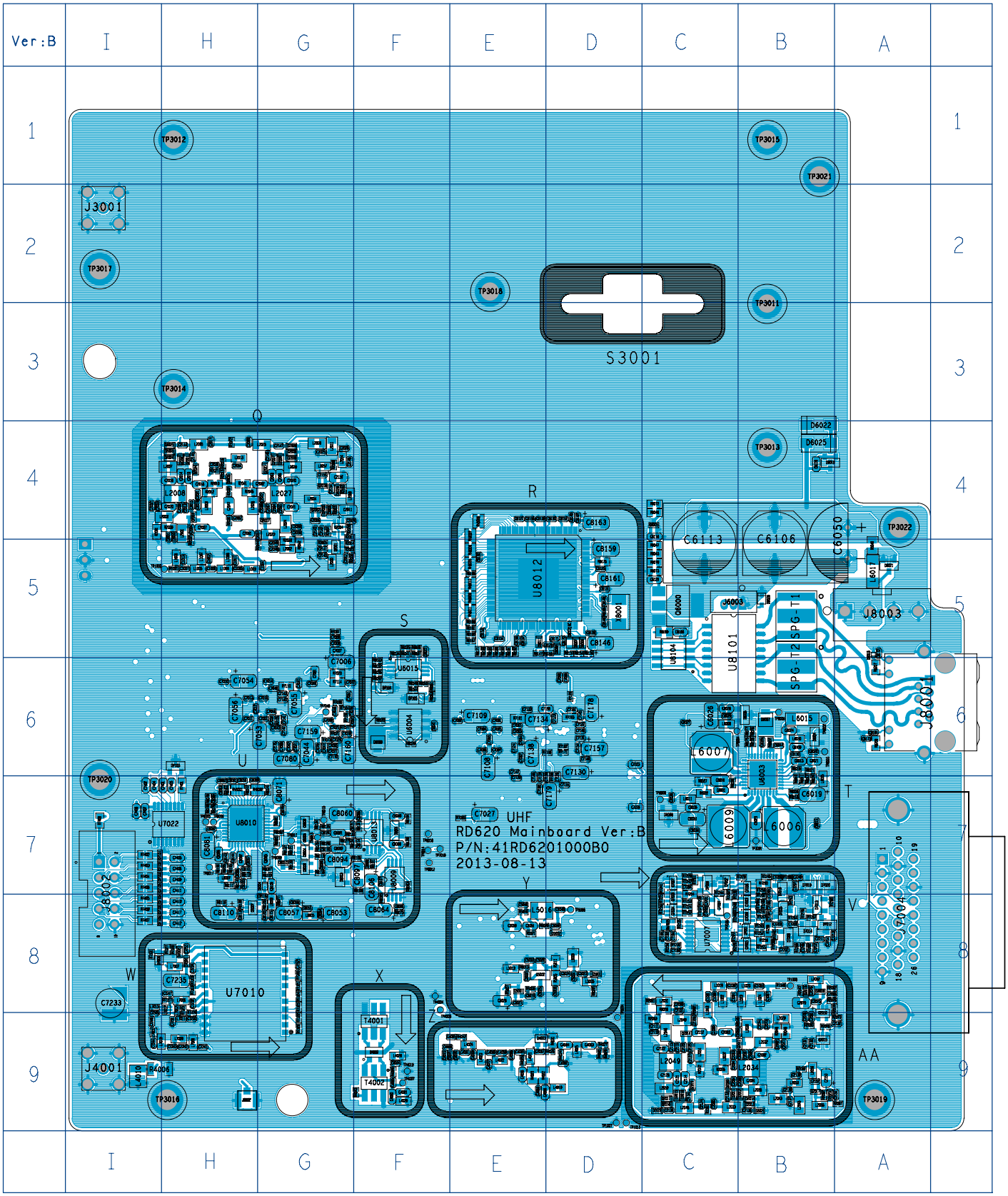
U7002
U7003
U7004
U7005
U7006
U7009
U5001
U6002
U6011
U6005
U6008
U6009
X7002
J6005
J6008
J7001
J7002
Q6002
D6014
F6001
Z4001
L8010
L5007

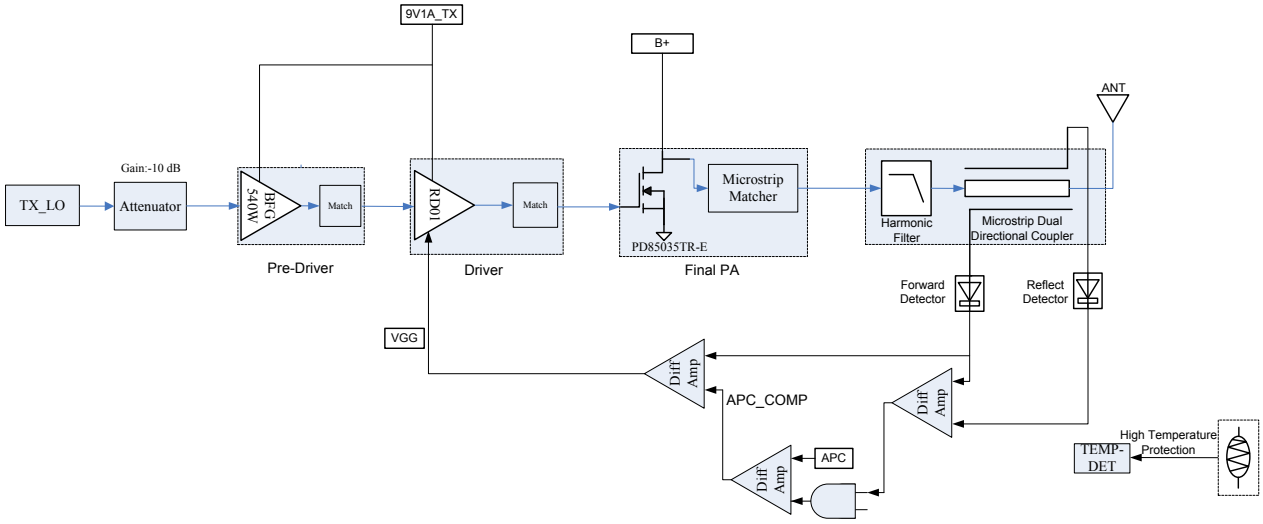
Main PCB-Bottom Layer

PCB View UHF1 (400 - 470MHz)

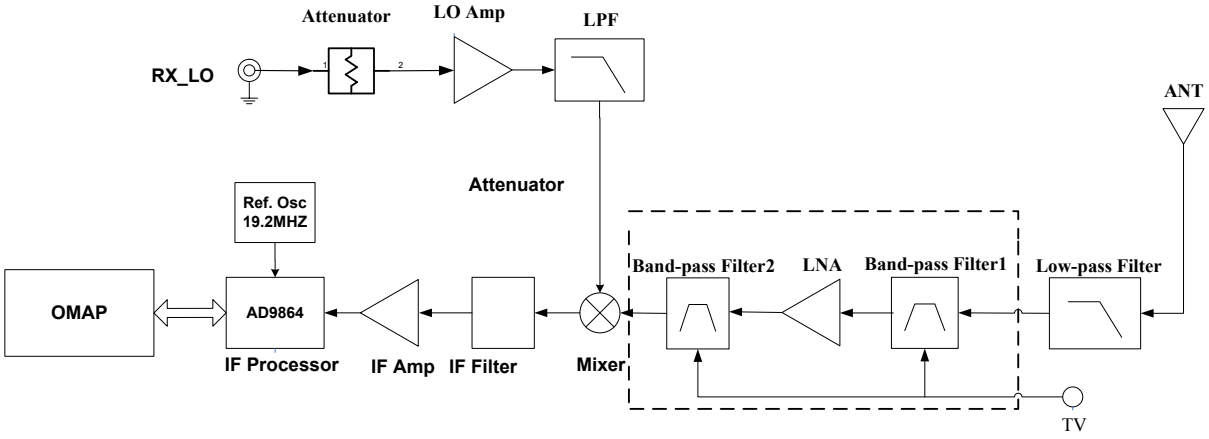


10. Block Diagram

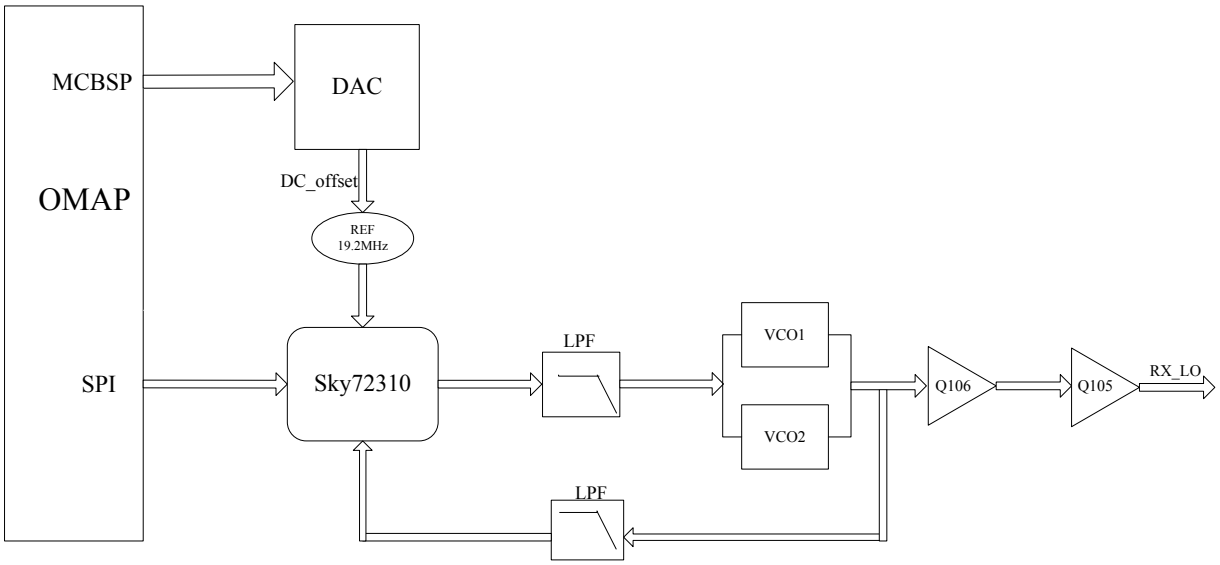
10.1 TX Circuit



10.2 RX Circuit

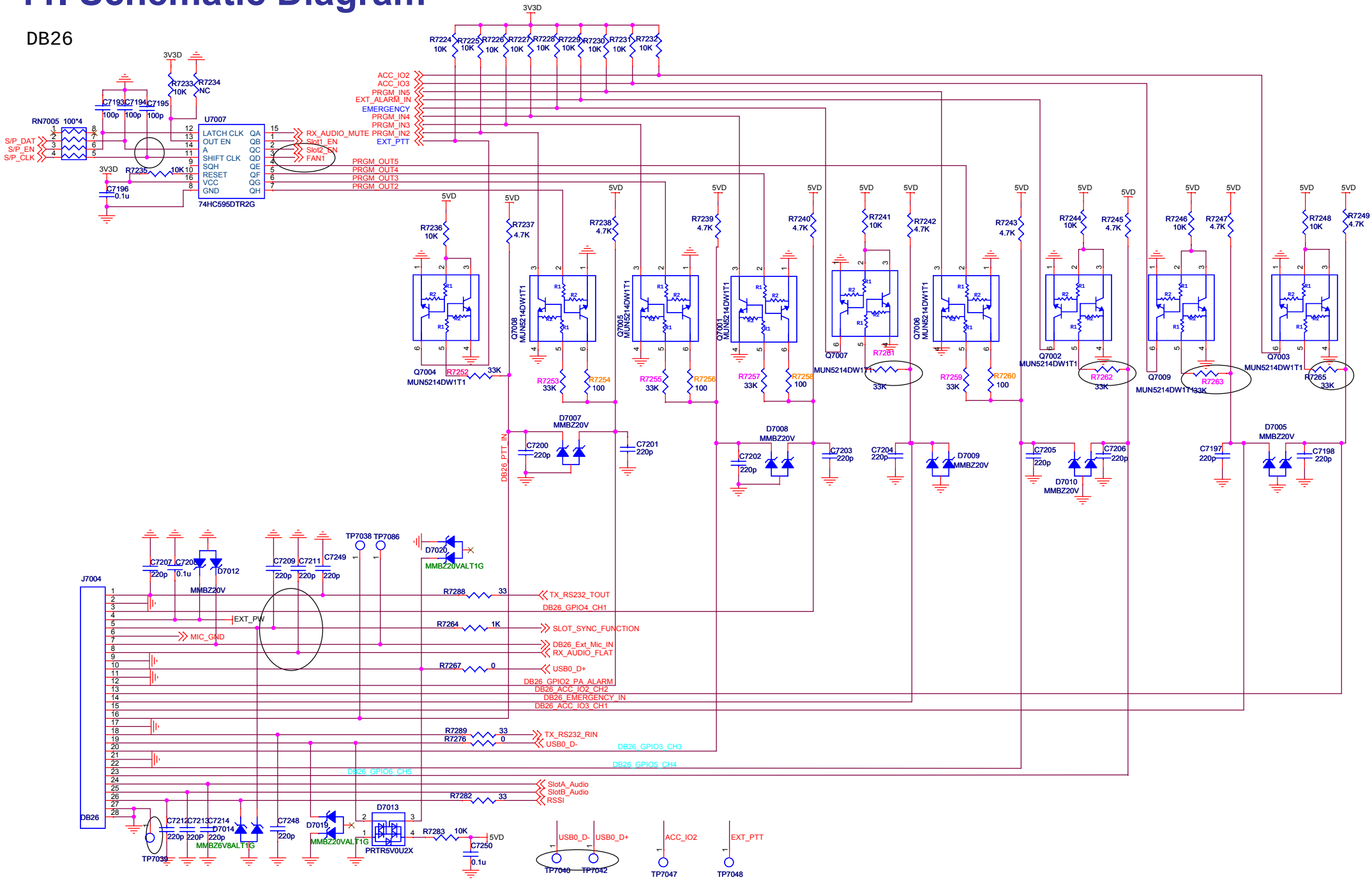


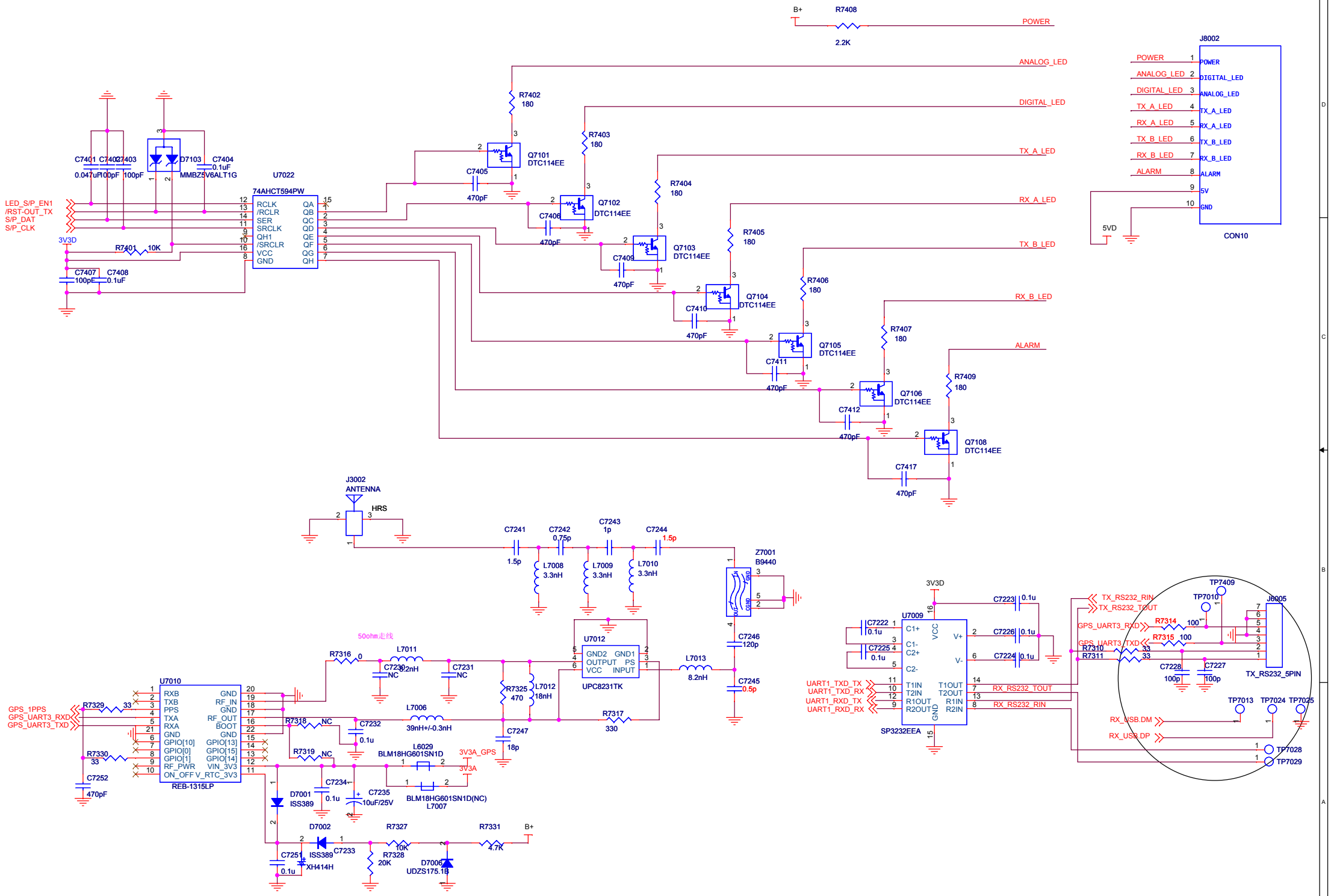
10.3 FUG Module

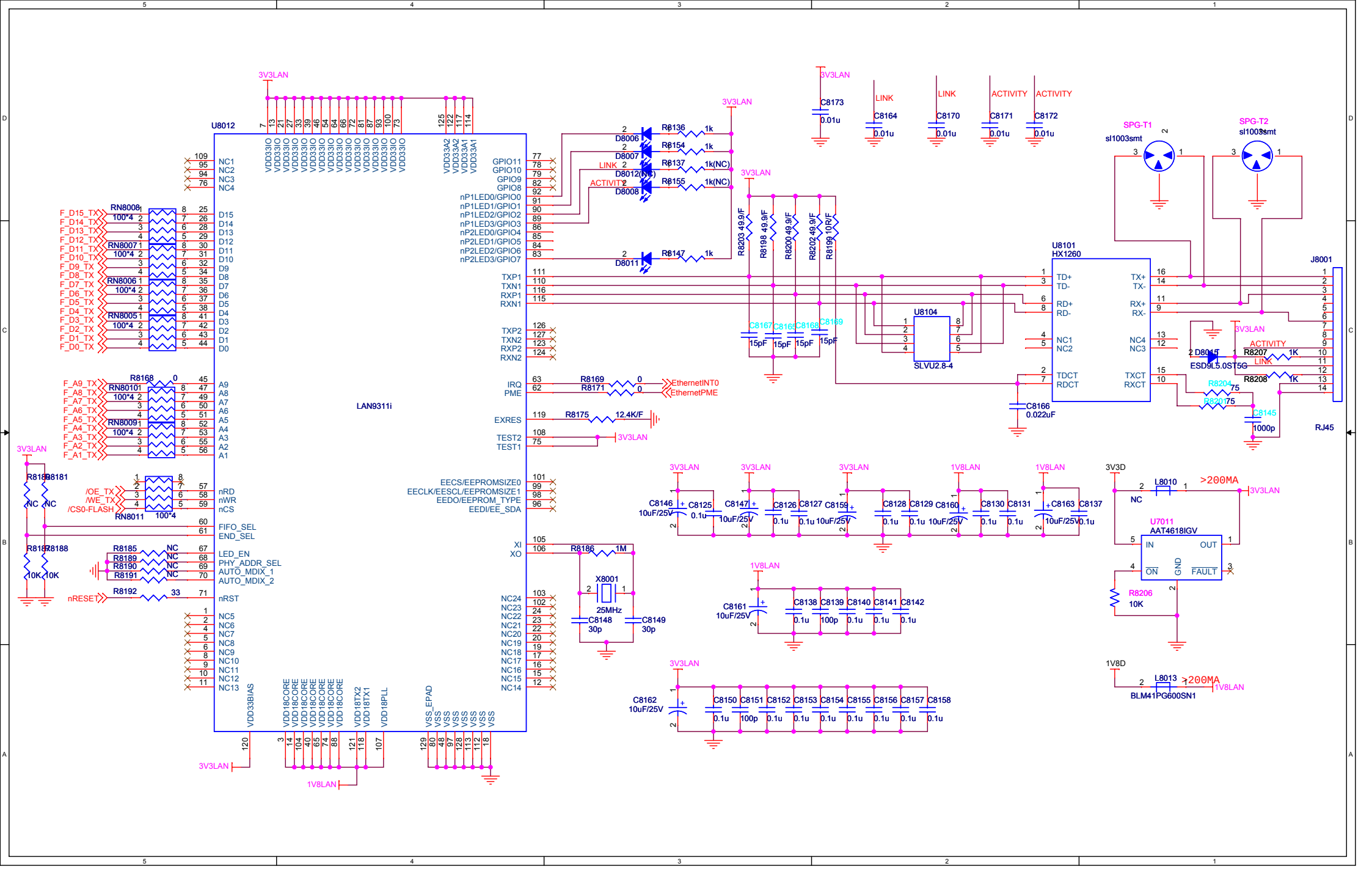


11. Schematic Diagram

DB26




B+
R7408
2.2K
POWER
ANALOG_LED
DIGITAL_LED
TX_A_LED
RX_A_LED
TX_B_LED
RX_B_LED
ALARM
J8002
POWER
DIGITAL_LED
ANALOG_LED
TX_A_LED
RX_A_LED
TX_B_LED
RX_B_LED
ALARM
5V
GND
CON10
5VD
C7401 0.047uF
C7402 100pF
C7403 100pF
D7103 MMBZ5V6ALT1G
C7404 0.1uF
U7022
74AHCT594PW
RCLK QA
/RCLR QB
SER QC
SRCLK QD
QH1 QE
/SRCLR QF
VCC QG
GND QH
LED_S/P_EN1
/RST-OUT_TX
S/P_DAT
S/P_CLK
3V3D
R7401 10K
C7407 100pF
C7408 0.1uF
R7402 180
R7403 180
R7404 180
R7405 180
R7406 180
R7407 180
R7409 180
Q7101 DTC114EE
Q7102 DTC114EE
Q7103 DTC114EE
Q7104 DTC114EE
Q7105 DTC114EE
Q7106 DTC114EE
Q7108 DTC114EE
C7405 470pF
C7406 470pF
C7409 470pF
C7410 470pF
C7411 470pF
C7412 470pF
C7417 470pF
J3002
ANTENNA
HRS
C7241 1.5p
C7242 0.75p
C7243 1p
C7244 1.5p
L7008 3.3nH
L7009 3.3nH
L7010 3.3nH
Z7001 B9440
C7246 120p
C7245 0.5p
L7013 8.2nH
U7012
GND2 GND1
OUTPUT PS
VCC INPUT
UPC8231TK
L7012 18nH
R7325 470
R7317 330
C7247 18p
50ohm走线
R7316 0
L7011 8.2nH
C7230 NC
C7231 NC
L7006 39nH+/-0.3nH
R7318 NC
C7232 0.1u
R7319 NC
L6029 BLM18HG601SN1D
L7007 BLM18HG601SN1D(NC)
3V3A_GPS
3V3A
C7234 0.1u
C7235 10uF/25V
D7001 ISS389
D7002 ISS389
C7233 XH414H
C7251 0.1u
R7327 10K
R7328 20K
R7331 4.7K
D7006 UDZS175.1B
U7010
REB-1315LP
RXB TXB PPS TXA RXA GND GPIO[10] GPIO[0] GPIO[1] RF_PWR ON_OFF
GND RF_IN GND RF_OUT BOOT GND GPIO[13] GPIO[15] GPIO[14] VIN_3V3 V_RTC_3V3
GPS_1PPS
GPS_UART3_RXD
GPS_UART3_TXD
R7329 33
R7330 33
C7252 470pF
U7009
SP3232EEA
C1+ C1- C2+ C2- V+ V- T1IN T2IN R1OUT R2OUT T1OUT T2OUT R1IN R2IN VCC GND
C7222 0.1u
C7225 0.1u
C7223 0.1u
C7226 0.1u
C7224 0.1u
UART1_TXD_TX
UART1_TXD_RX
UART1_RXD_TX
UART1_RXD_RX
RX_RS232_TOUT
RX_RS232_RIN
TX_RS232_RIN
TX_RS232_TOUT
GPS_UART3_RXD
GPS_UART3_TXD
R7314 100
R7315 100
R7310 33
R7311 33
C7228 100p
C7227 100p
J8005
TX_RS232_5PIN
TP7409
TP7010
TP7013
TP7024
TP7025
TP7028
TP7029
RX_USB.DM
RX_USB.DP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1V8LAN
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HX1260
U8104
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RJ45
SPG-T1
SPG-T2
sl1003smt
ESD9L5.0ST5G
U7011
AAT4618IGV
L8010
L8013
BLM41PG600SN1
>200MA
X8001
25MHz
LINK
ACTIVITY
EthernetINT0
EthernetPME
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F_D14_TX
F_D13_TX
F_D12_TX
F_D11_TX
F_D10_TX
F_D9_TX
F_D8_TX
F_D7_TX
F_D6_TX
F_D5_TX
F_D4_TX
F_D3_TX
F_D2_TX
F_D1_TX
F_D0_TX
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F_A8_TX
F_A7_TX
F_A6_TX
F_A5_TX
F_A4_TX
F_A3_TX
F_A2_TX
F_A1_TX
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/WE_TX
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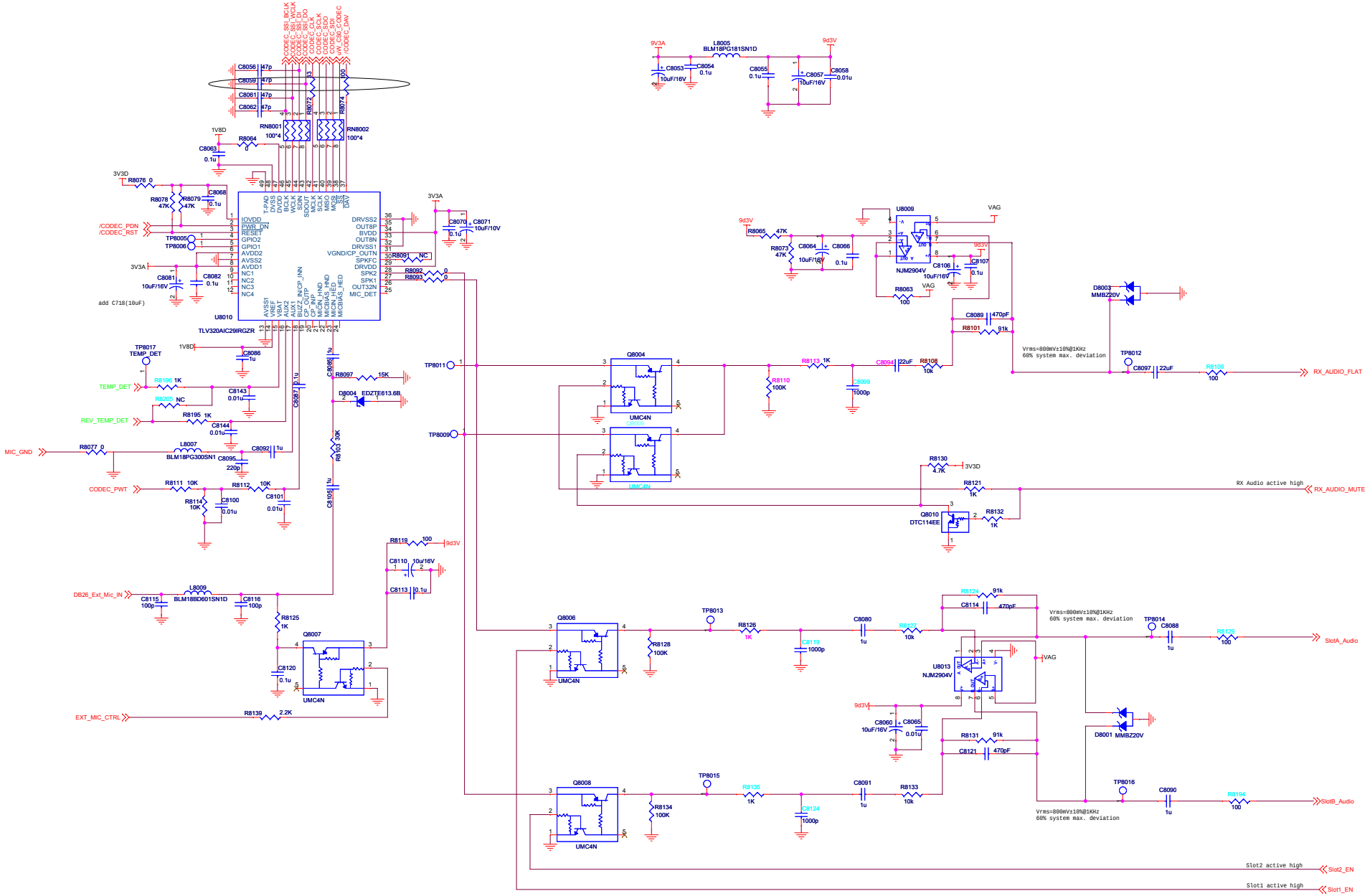
FIFO_SEL
END_SEL
LED_EN
PHY_ADDR_SEL
AUTO_MDIX_1
AUTO_MDIX_2
nRST
nRD
nWR
nCS
IRQ
PME
EXRES
TEST2
TEST1
EECS/EEPROMSIZE0
EECLK/EESCL/EEPROMSIZE1
EEDO/EEPROM_TYPE
EEDI/EE_SDA
XI
XO
TXP1
TXN1
RXP1
RXN1
TXP2
TXN2
RXP2
RXN2
GPIO11
GPIO10
GPIO9
GPIO8
nP1LED0/GPIO0
nP1LED1/GPIO1
nP1LED2/GPIO2
nP1LED3/GPIO3
nP2LED0/GPIO4
nP2LED1/GPIO5
nP2LED2/GPIO6
nP2LED3/GPIO7
TD+
TD-
RD+
RD-
TDCT
RDCT
TX+
TX-
RX+
RX-
TXCT
RXCT
NC1
NC2
NC3
NC4
NC5
NC6
NC7
NC8
NC9
NC10
NC11
NC12
NC13
NC14
NC15
NC16
NC17
NC18
NC19
NC20
NC21
NC22
NC23
NC24
VDD33BIAS
VDD18CORE
VDD18TX2
VDD18TX1
VDD18PLL
VSS_EPAD
VSS
IN
OUT
ON
GND
FAULT
NC

Codec & Audio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BLM18PG300SN1
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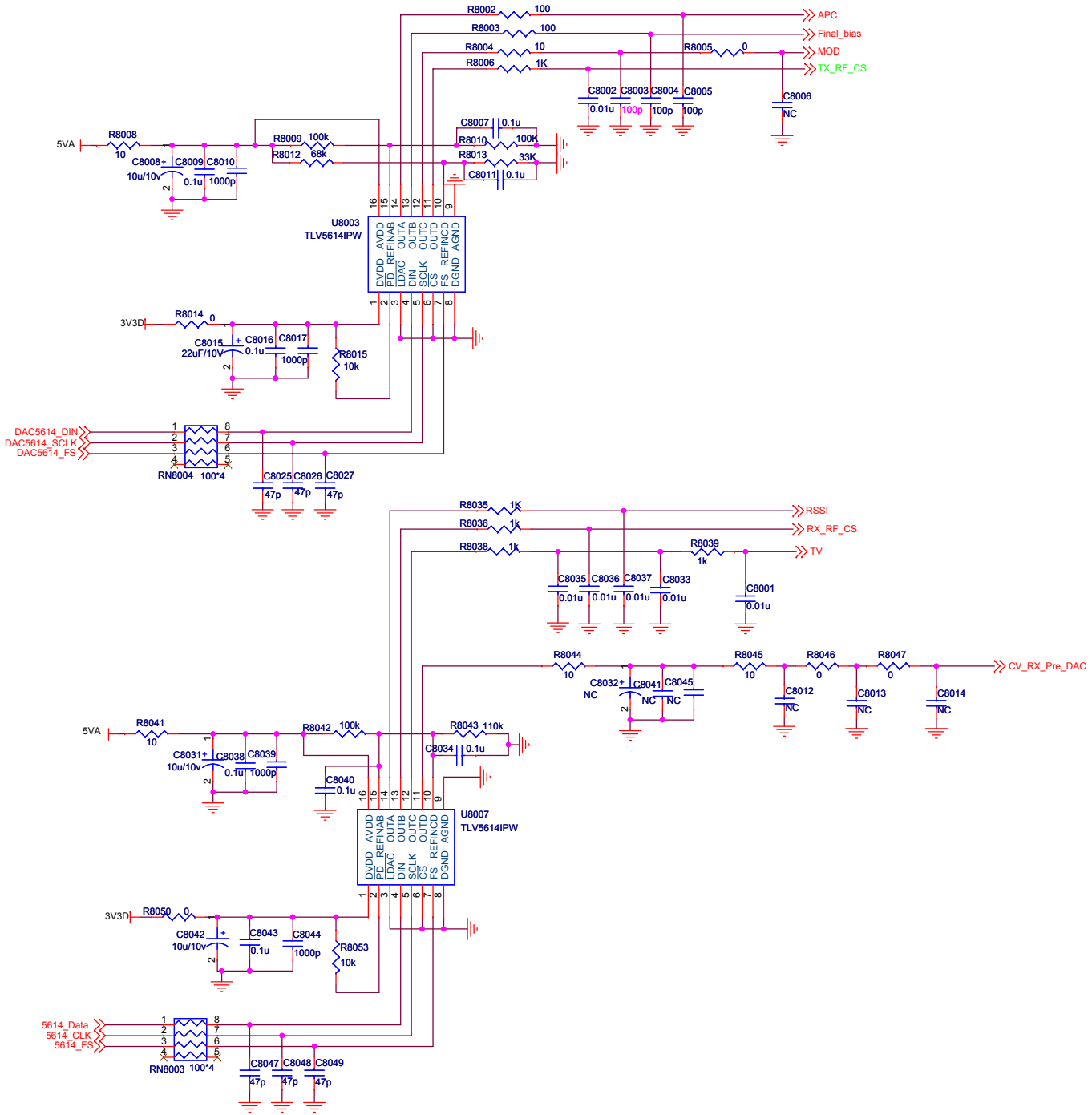
BLM18BD601SN1D
TP8005
TP8006
TP8009
TP8011
TP8012
TP8013
TP8014
TP8015
TP8016
TP8017
TEMP_DET
RX_AUDIO_FLAT
RX_AUDIO_MUTE
SlotA_Audio
SlotB_Audio
Slot2_EN
Slot1_EN
EXT_MIC_CTRL
MIC_GND
CODEC_PWT
REV_TEMP_DET
DB26_Ext_Mic_IN
/CODEC_PDN
/CODEC_RST
RX Audio active high
Slot2 active high
Slot1 active high
Vrms=800mV±10%@1KHz
60% system max. deviation
add C718(10uF)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R8004 10
R8006 1K
R8005 0
APC
Final_bias
MOD
TX_RF_CS
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C8003 100p
C8004 100p
C8005 100p
C8006 NC
5VA
R8008 10
C8008 10u/10v
C8009 0.1u
C8010 1000p
R8009 100k
R8012 68k
C8007 0.1u
R8010 100k
R8013 33K
C8011 0.1u
U8003
TLV5614IPW
DVDD AVDD REFINAB OUTA OUTB OUTC OUTD REFINCD
PD_RC LDAC DIN SCLK CS FS DGND AGND
3V3D
R8014 0
C8015 22uF/10V
C8016 0.1u
C8017 1000p
R8015 10k
DAC5614_DIN
DAC5614_SCLK
DAC5614_FS
RN8004 100*4
C8025 47p
C8026 47p
C8027 47p
R8035 1K
R8036 1k
R8038 1k
RSSI
RX_RF_CS
TV
R8039 1k
C8035 0.01u
C8036 0.01u
C8037 0.01u
C8033 0.01u
C8001 0.01u
R8044 10
R8045 10
R8046 0
R8047 0
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C8032 NC
C8041 NC
C8045 NC
C8012 NC
C8013 NC
C8014 NC
5VA
R8041 10
C8031 10u/10v
C8038 0.1u
C8039 1000p
R8042 100k
R8043 110k
C8034 0.1u
C8040 0.1u
U8007
TLV5614IPW
DVDD AVDD REFINAB OUTA OUTB OUTC OUTD REFINCD
PD_RC LDAC DIN SCLK CS FS DGND AGND
3V3D
R8050 0
C8042 10u/10v
C8043 0.1u
C8044 1000p
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5614_CLK
5614_FS
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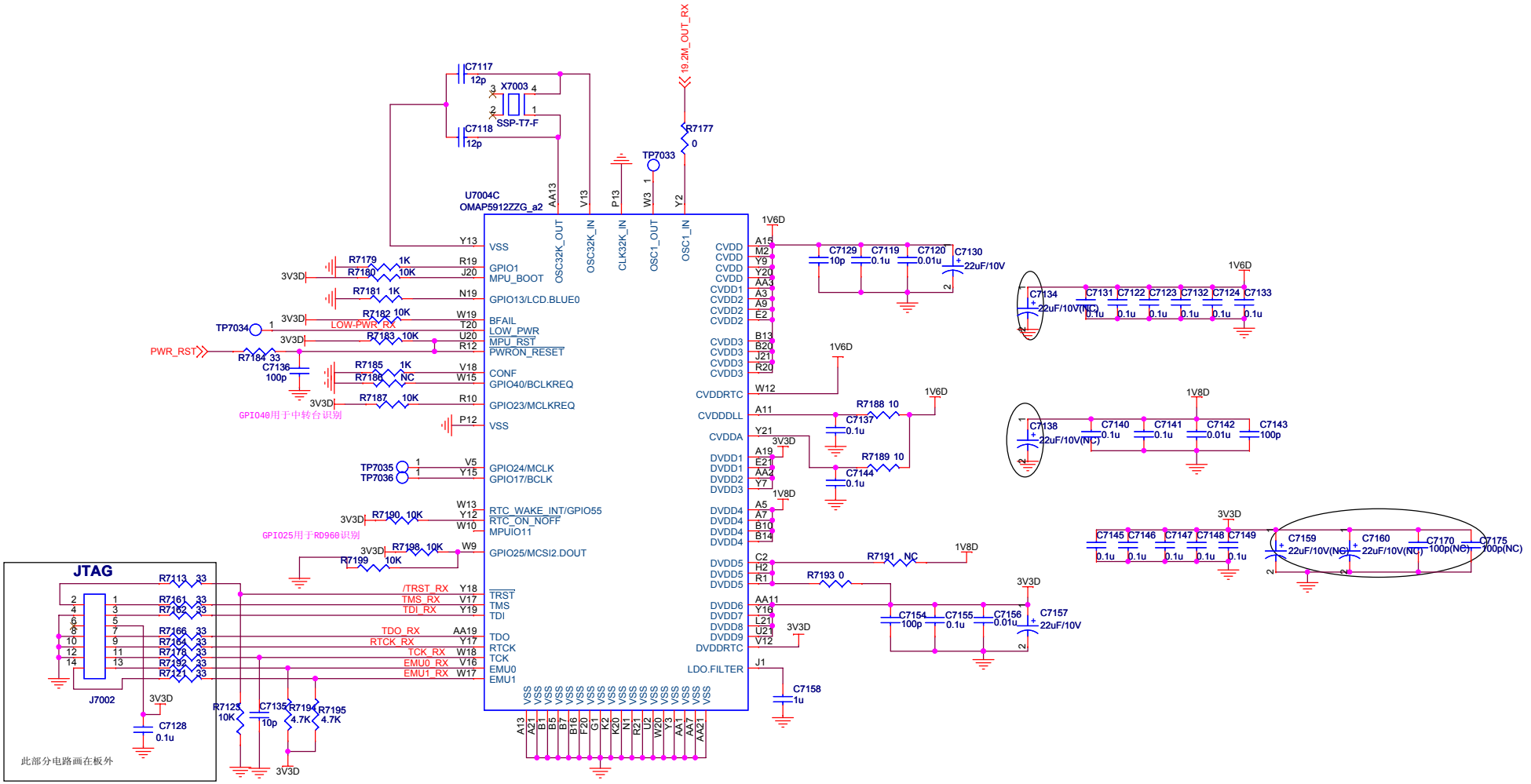
C8047 47p
C8048 47p
C8049 47p

OMAP_Core_RX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C7118 12p
X7003
SSP-T7-F
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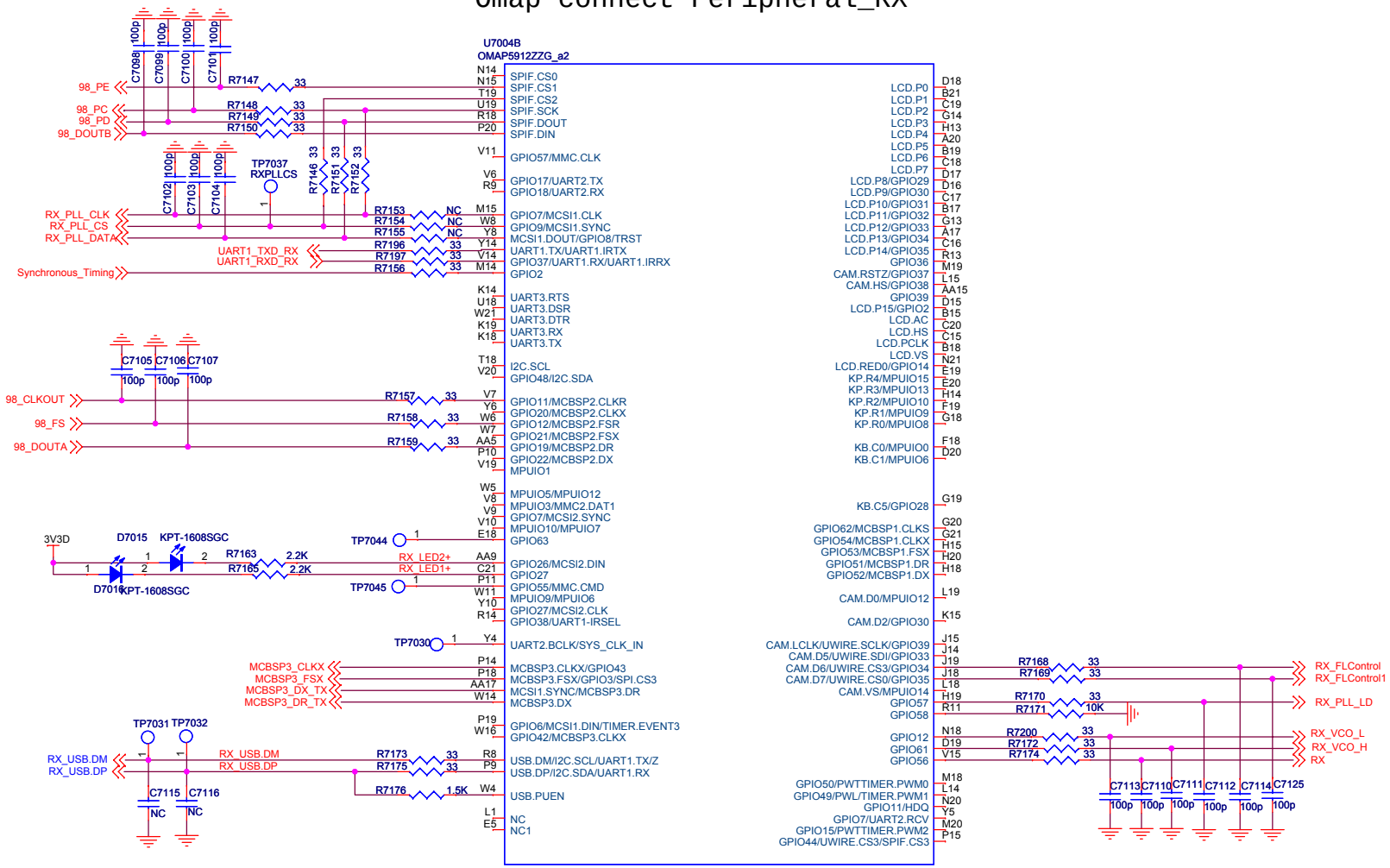
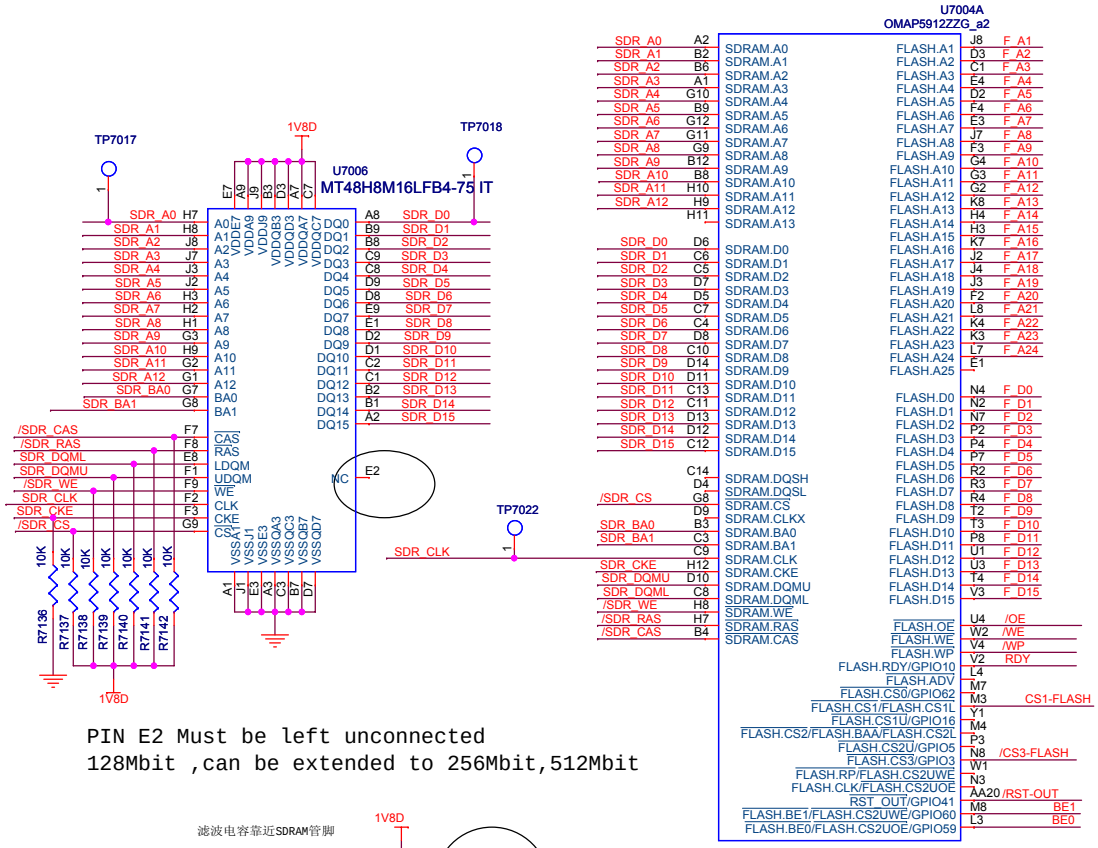
R7177 0
TP7033
VSS
GPIO1
MPU_BOOT
GPIO13/LCD.BLUE0
BFAIL
LOW_PWR
MPU_RST
PWRON_RESET
CONF
GPIO40/BCLKREQ
GPIO23/MCLKREQ
VSS
GPIO24/MCLK
GPIO17/BCLK
RTC_WAKE_INT/GPIO55
RTC_ON_NOFF
MPUIO11
GPIO25/MCSI2.DOUT
TRST
TMS
TDI
TDO
RTCK
TCK
EMU0
EMU1
OSC32K_OUT
OSC32K_IN
CLK32K_IN
OSC1_OUT
OSC1_IN
CVDD
CVDD1
CVDD2
CVDD3
CVDDRTC
CVDDDLL
CVDDA
DVDD1
DVDD2
DVDD3
DVDD4
DVDD5
DVDD6
DVDD7
DVDD8
DVDD9
DVDDRTC
LDO.FILTER
VSS
PWR_RST
LOW-PWR_RX
GPIO40用于中转台识别
GPIO25用于RD960识别
JTAG
J7002
/TRST_RX
TMS_RX
TDI_RX
TDO_RX
RTCK_RX
TCK_RX
EMU0_RX
EMU1_RX
此部分电路画在板外
1V6D
1V8D
3V3D

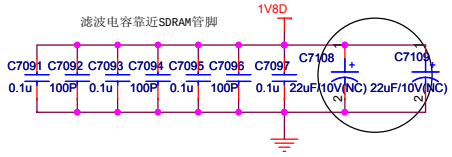
Omap connect Peripheral_RX

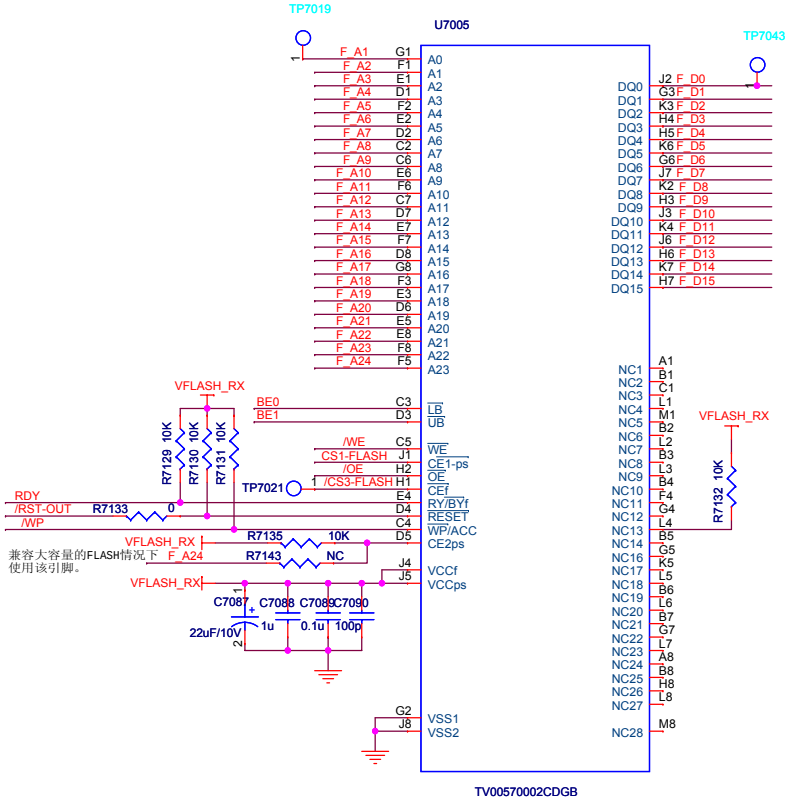


Memory_RX

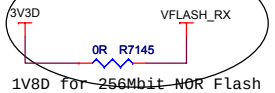


PIN E2 Must be left unconnected
128Mbit ,can be extended to 256Mbit,512Mbit



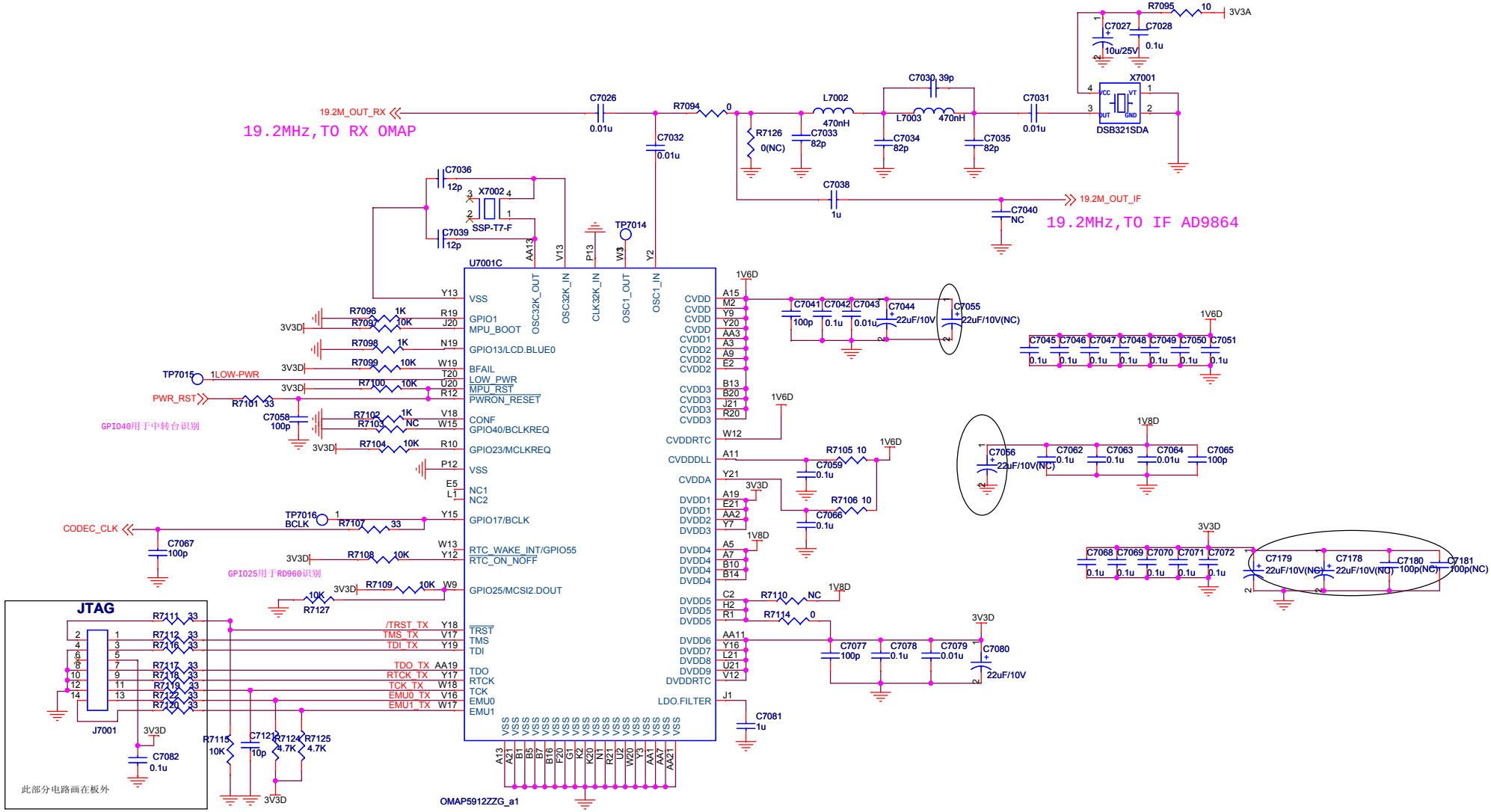


128Mbit NOR Flash , can be extended to 256Mbit

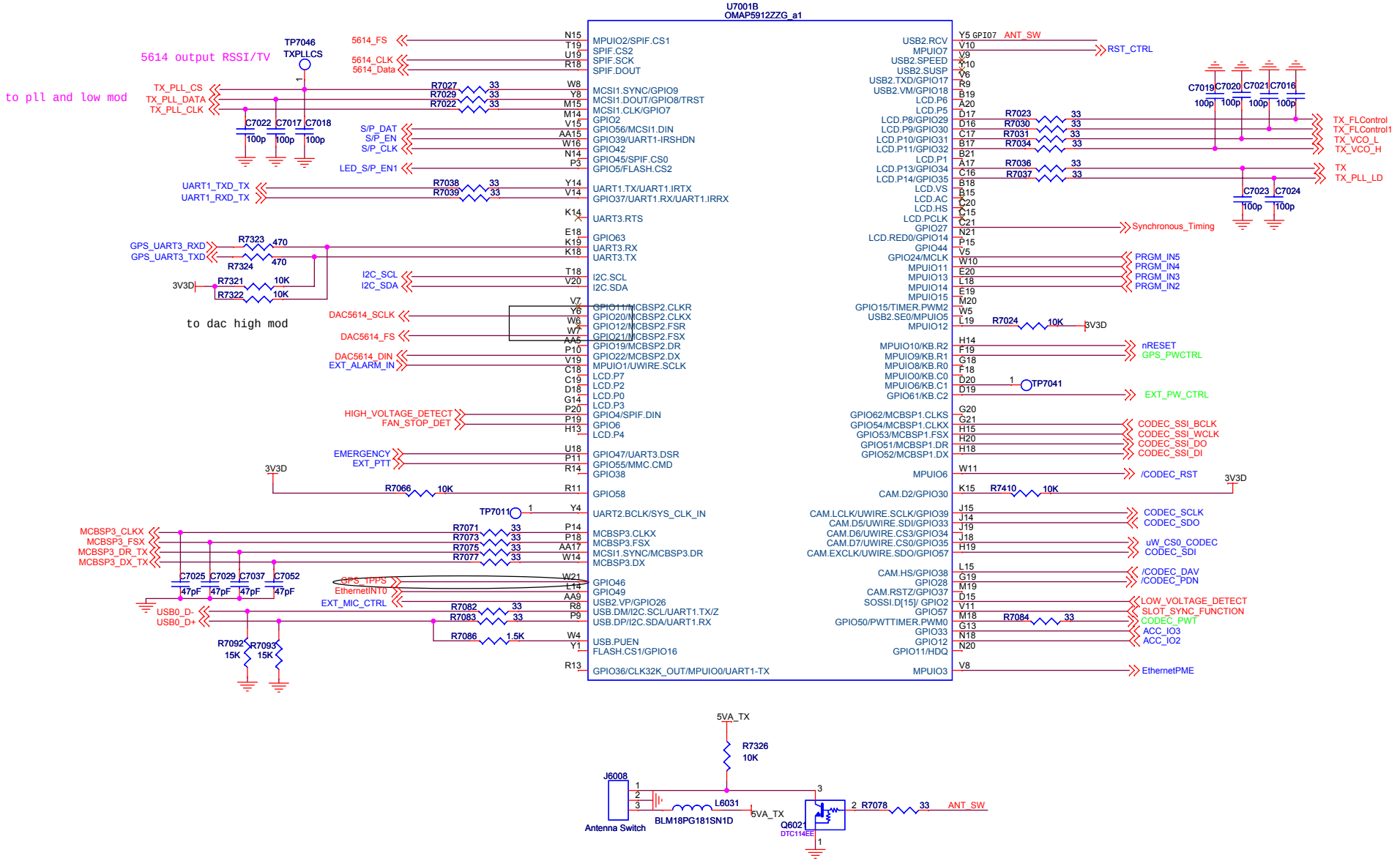


1V8D for 256Mbit NOR Flash
3VD for 128Mbit NOR Flash

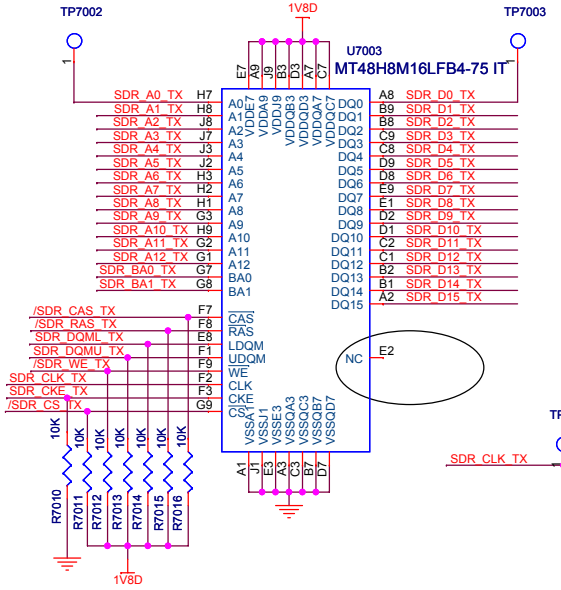
OMAP_Core_TX


19.2M_OUT_RX
19.2MHz,TO RX OMAP
19.2M_OUT_IF
19.2MHz,TO IF AD9864
X7001
DSB321SDA
X7002
SSP-T7-F
U7001C
OMAP5912ZZG_a1
JTAG
J7001
此部分电路画在板外
GPIO40用于中转台识别
GPIO25用于RD960识别
CODEC_CLK
PWR_RST
1LOW-PWR
3V3A
1V6D
1V8D
3V3D

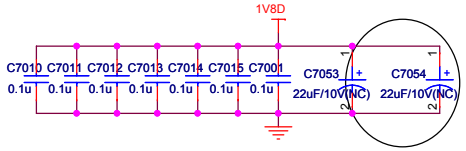
Omap connect Peripheral_TX

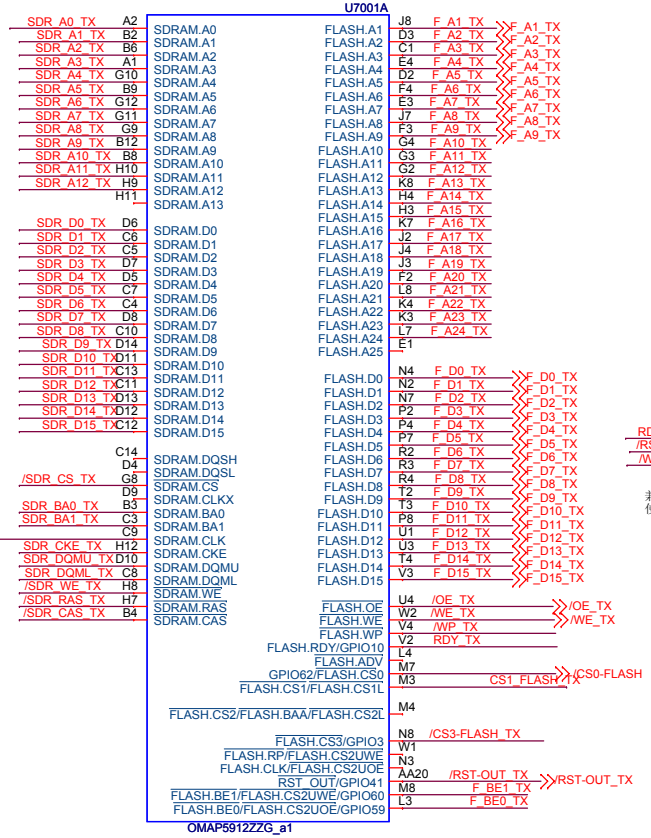


Memory_TX

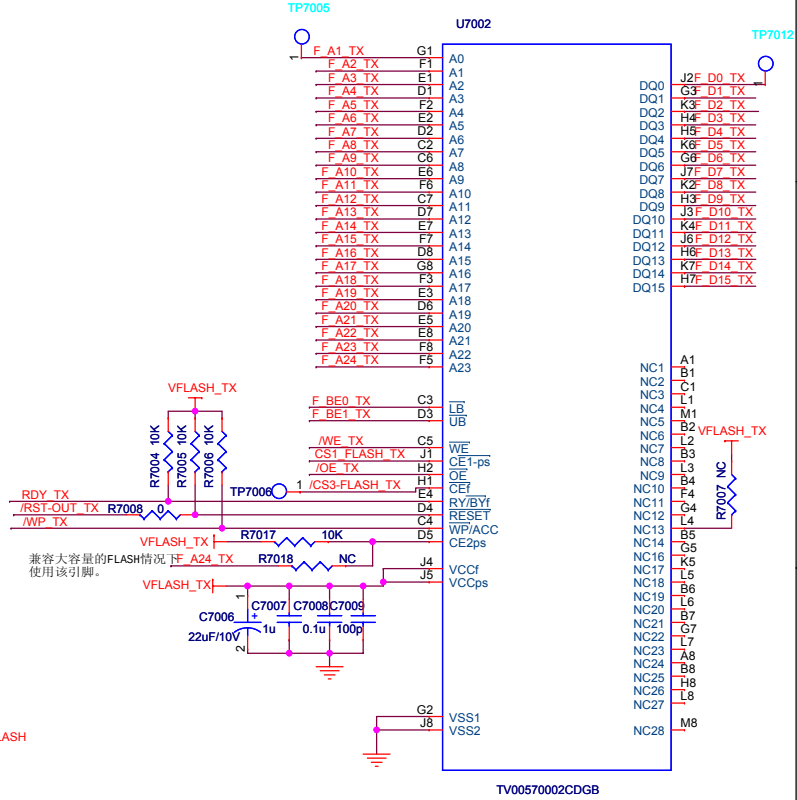


PIN E2 Must be left unconnected
128Mbit ,can be extended to 256Mbit

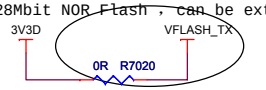




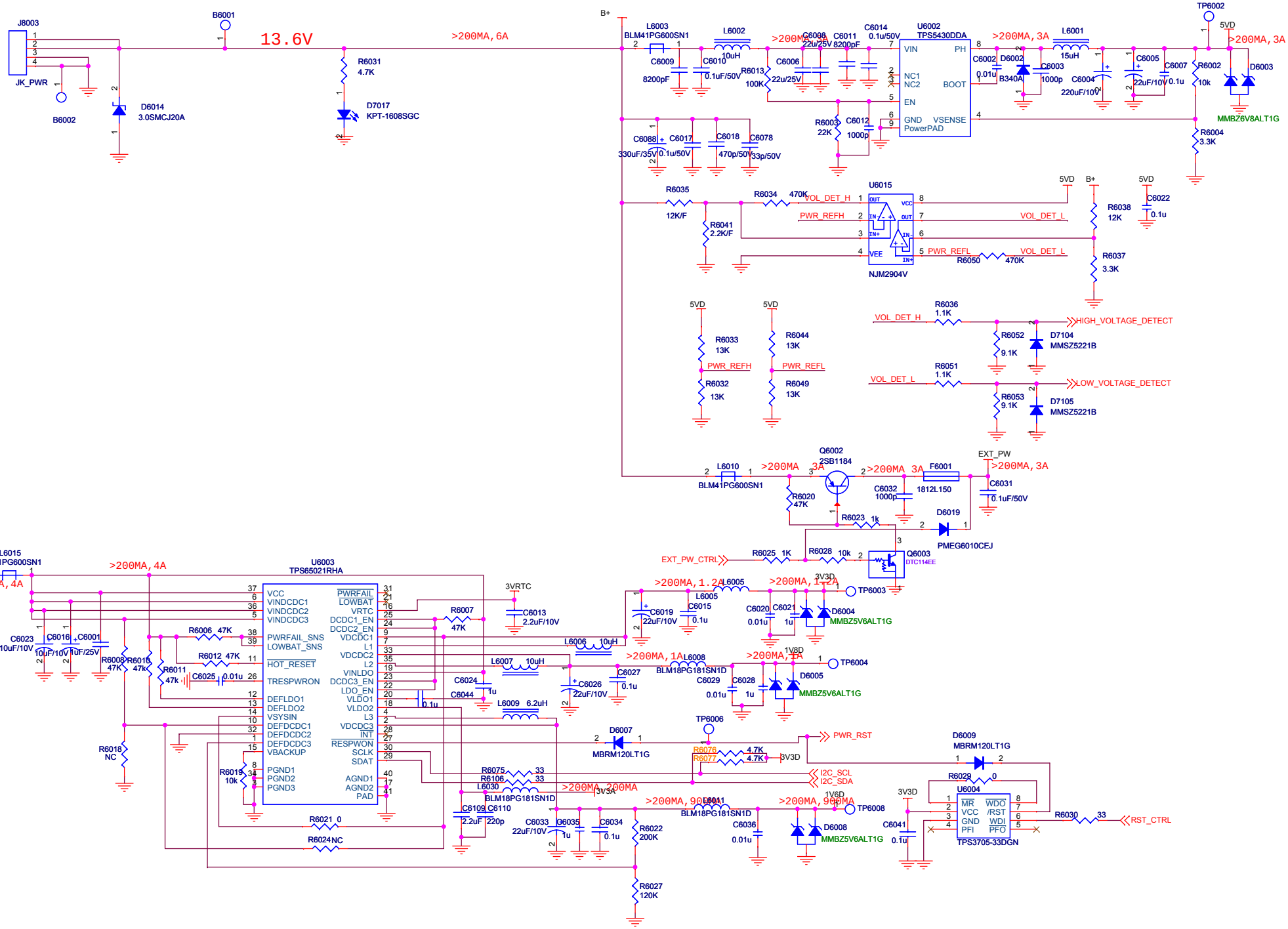
CS0：以太网
CS1：pSRAM（FLASH 二合一芯片）
CS3：FLASH（FLASH 二合一芯片）

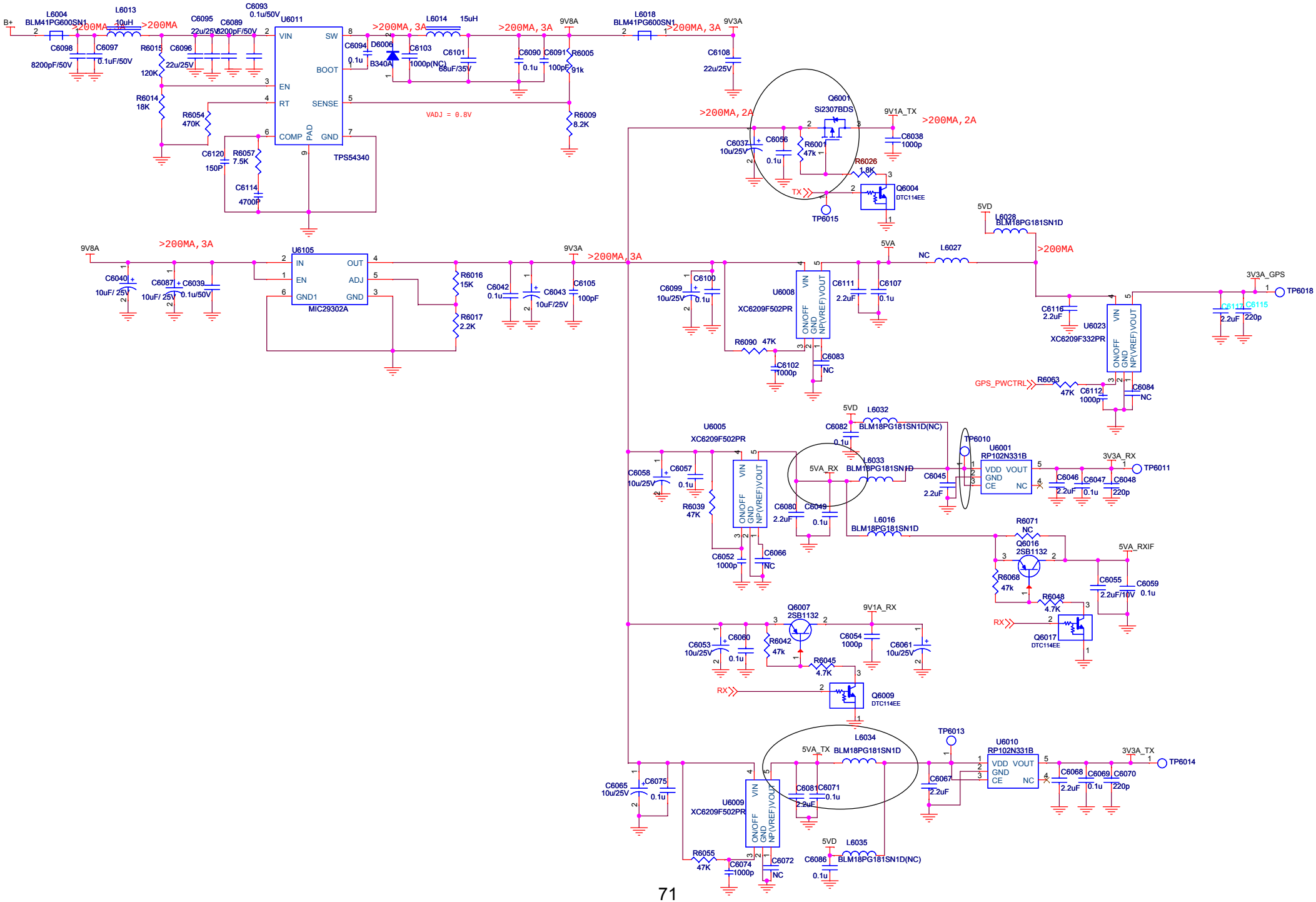


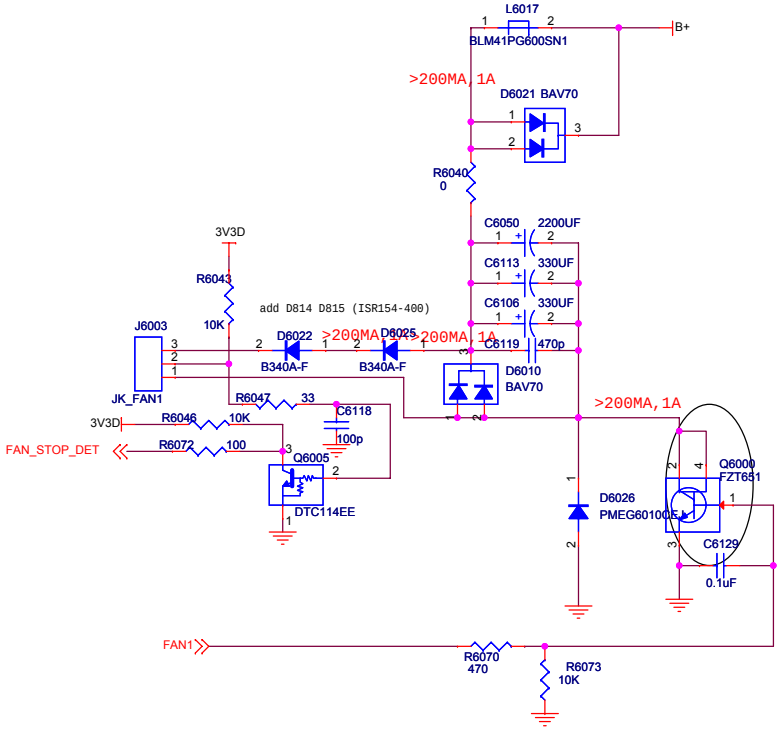
128Mbit NOR Flash , can be extended to 256Mbit

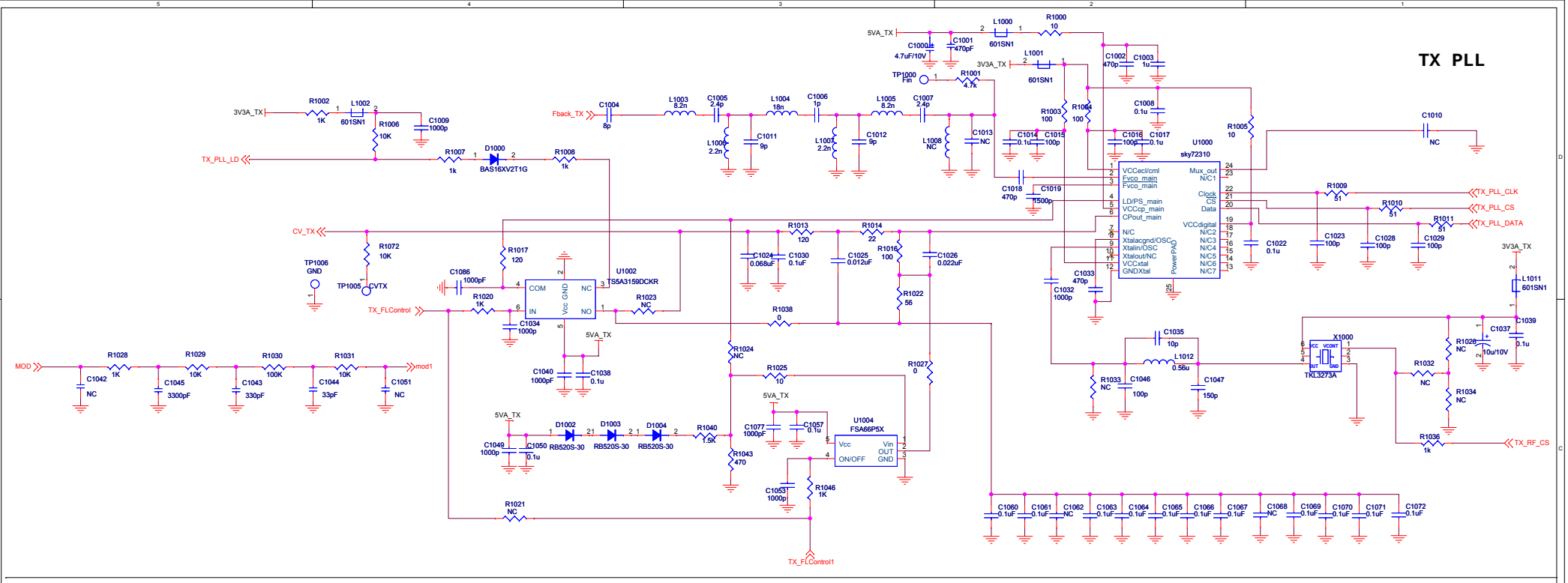


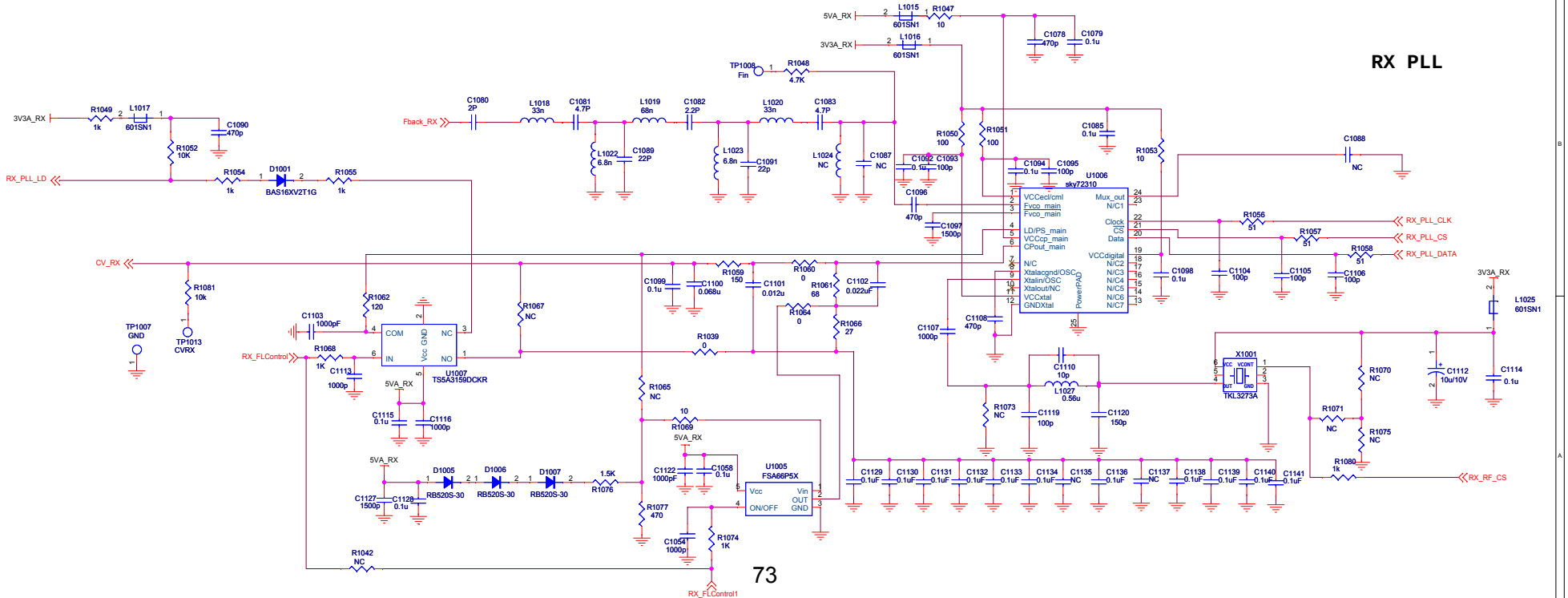
1V8D for 256Mbit NOR Flash
3VD for 128Mbit NOR Flash

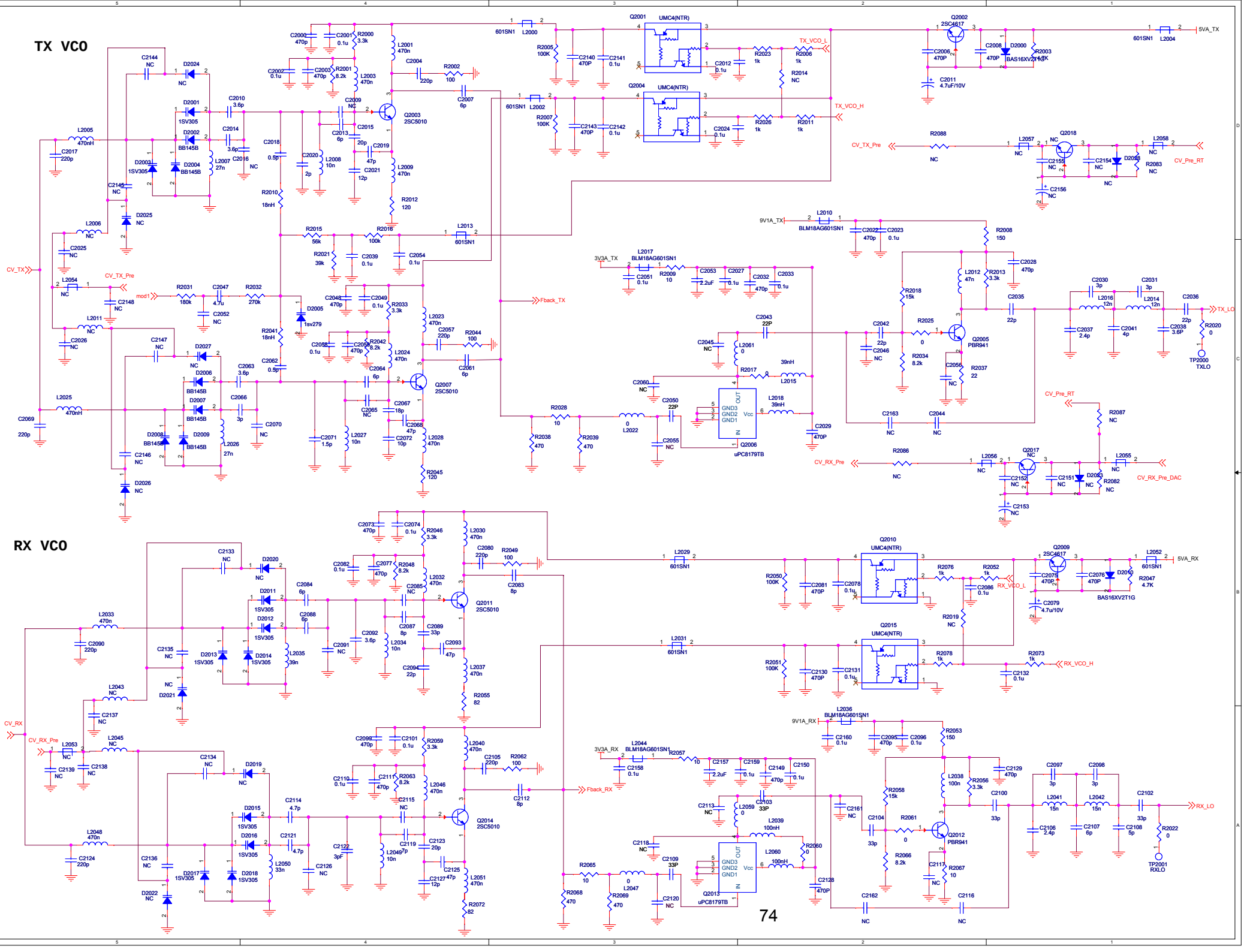

J8003
JK_PWR
B6001
B6002
13.6V
>200MA,6A
D6014
3.0SMCJ20A
R6031
4.7K
D7017
KPT-1608SGC
B+
L6003
BLM41PG600SN1
L6002
10uH
C6009
8200pF
C6010
0.1uF/50V
R6013
100K
C6008
22u/25V
C6011
8200pF
C6014
0.1u/50V
C6006
22u/25V
U6002
TPS5430DDA
VIN
PH
NC1
NC2
BOOT
EN
GND
VSENSE
PowerPAD
C6002
0.01u
D6002
B340A
L6001
15uH
C6003
1000p
C6004
220uF/100V
C6005
22uF/10V
C6007
0.1u
R6002
10k
D6003
MMBZ6V8ALT1G
TP6002
5VD
>200MA,3A
R6004
3.3K
C6088
330uF/35V
C6017
0.1u/50V
C6018
470p/50V
C6078
33p/50V
R6003
22K
C6012
1000p
R6035
12K/F
R6041
2.2K/F
R6034
470K
U6015
NJM2904V
VOL_DET_H
PWR_REFH
PWR_REFL
VOL_DET_L
R6050
470K
R6038
12K
R6037
3.3K
C6022
0.1u
R6033
13K
R6032
13K
R6044
13K
R6049
13K
R6036
1.1K
R6052
9.1K
D7104
MMSZ5221B
HIGH_VOLTAGE_DETECT
R6051
1.1K
R6053
9.1K
D7105
MMSZ5221B
LOW_VOLTAGE_DETECT
L6010
BLM41PG600SN1
Q6002
2SB1184
R6020
47K
F6001
1812L150
C6032
1000p
EXT_PW
C6031
0.1uF/50V
R6023
1k
D6019
PMEG6010CEJ
Q6003
DTC114EE
EXT_PW_CTRL
R6025
1K
R6028
10k
L6015
BLM41PG600SN1
>200MA,4A
U6003
TPS65021RHA
VCC
VINDCDC1
VINDCDC2
VINDCDC3
PWRFAIL_SNS
LOWBAT_SNS
HOT_RESET
TRESPWRON
DEFLDO1
DEFLDO2
VSYSIN
DEFDCDC1
DEFDCDC2
DEFDCDC3
VBACKUP
PGND1
PGND2
PGND3
PWRFAIL
LOWBAT
VRTC
DCDC1_EN
DCDC2_EN
VDCDC1
L1
VDCDC2
L2
VINLDO
DCDC3_EN
LDO_EN
VLDO1
VLDO2
L3
VDCDC3
INT
RESPWON
SCLK
SDAT
AGND1
AGND2
PAD
3VRTC
C6013
2.2uF/10V
R6007
47K
C6023
10uF/10V
C6016
10uF/10V
C6001
1uF/25V
R6006
47K
R6008
47K
R6010
47K
R6012
47K
R6011
47k
C6025
0.01u
R6018
NC
R6019
10k
R6021
0
R6024
NC
L6006
10uH
L6007
10uH
C6024
1u
C6044
0.1u
L6009
6.2uH
C6026
22uF/10V
C6027
0.1u
R6075
33
R6106
33
L6030
BLM18PG181SN1D
C6109
2.2uF
C6110
220p
C6033
22uF/10V
L6035
1u
C6034
0.1u
R6022
200K
R6027
120K
>200MA,1.2A
L6005
C6019
22uF/10V
C6015
0.1u
C6020
0.01u
C6021
1u
D6004
MMBZ5V6ALT1G
TP6003
>200MA,1A
L6008
BLM18PG181SN1D
C6029
0.01u
C6028
1u
D6005
MMBZ5V6ALT1G
TP6004
D6007
MBRM120LT1G
TP6006
R6076
4.7K
R6077
4.7K
PWR_RST
I2C_SCL
I2C_SDA
>200MA,200MA
>200MA,900MA
L6041
BLM18PG181SN1D
C6036
0.01u
D6008
MMBZ5V6ALT1G
TP6008
D6009
MBRM120LT1G
R6029
0
U6004
TPS3705-33DGN
MR
WDO
VCC
/RST
GND
WDI
PFI
PFO
C6041
0.1u
R6030
33
RST_CTRL

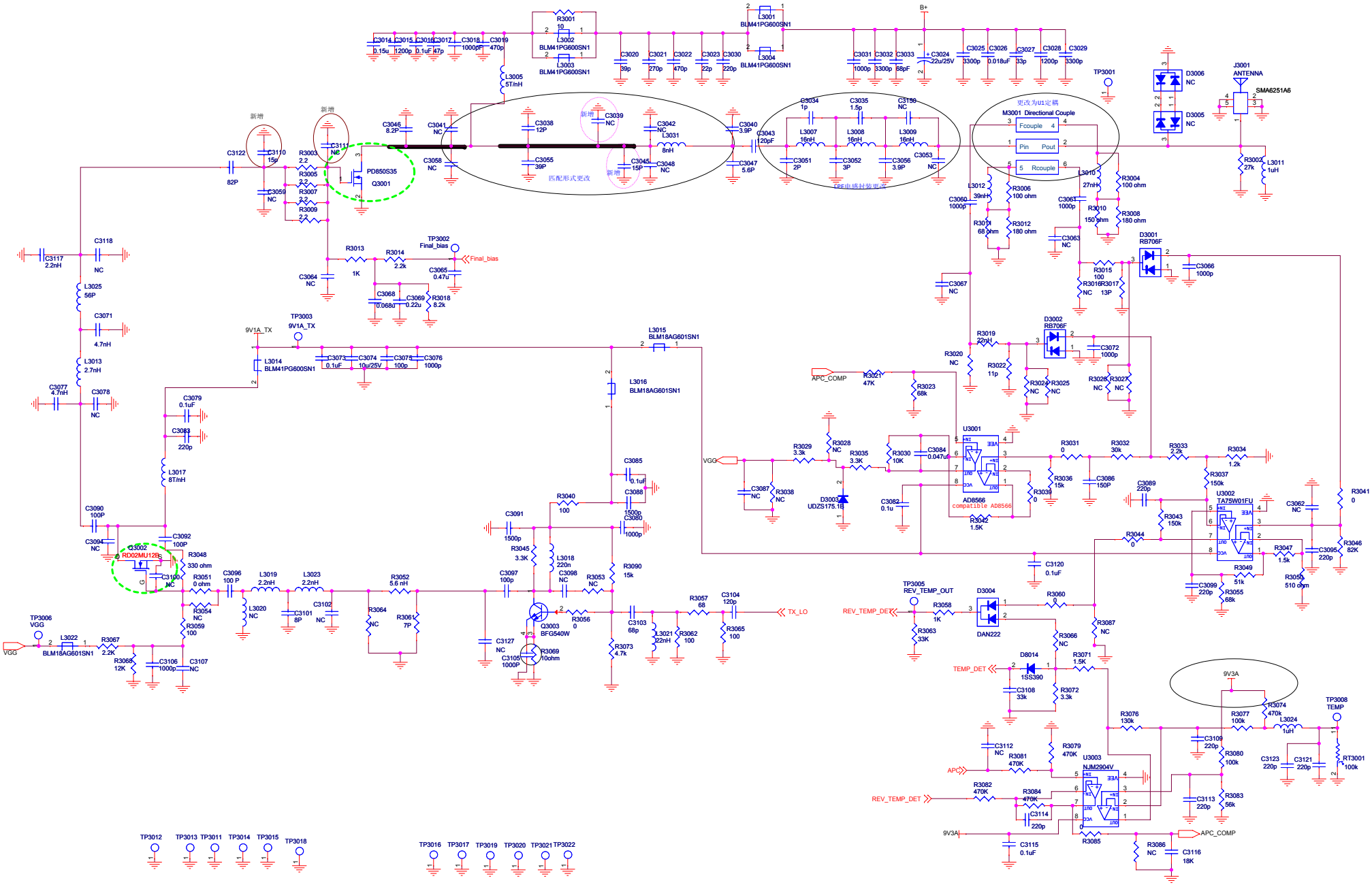

B+
L6004
BLM41PG600SN1
L6013
10uH
>200MA
C6095
22u/25V
C6089
8200pF/50V
C6093
0.1u/50V
U6011
VIN
SW
BOOT
EN
RT
SENSE
COMP
PAD
GND
TPS54340
C6098
8200pF/50V
C6097
0.1uF/50V
R6015
120K
C6096
22u/25V
R6014
18K
R6054
470K
C6120
150P
R6057
7.5K
C6114
4700P
>200MA, 3A
C6094
0.1u
D6006
B340A
C6103
1000p(NC)
L6014
15uH
C6101
68uF/35V
9V8A
C6090
0.1u
C6091
100pF
R6005
91k
R6009
8.2K
VADJ = 0.8V
L6018
BLM41PG600SN1
9V3A
C6108
22u/25V
>200MA, 2A
Q6001
Si2307BDS
9V1A_TX
C6037
10u/25V
C6056
0.1u
R6001
47k
R6026
1.8K
Q6004
DTC114EE
TX
TP6015
C6038
1000p
5VD
L6028
BLM18PG181SN1D
>200MA
5VA
NC
L6027
3V3A_GPS
TP6018
C6116
2.2uF
U6023
XC6209F332PR
VIN
ON/OFF
GND
NP(VREF)VOUT
C6112
2.2uF
C6115
220p
GPS_PWCTRL
R6063
47K
C6112
1000p
C6084
NC
9V8A
>200MA, 3A
U6105
IN
OUT
EN
ADJ
GND1
GND
MIC29302A
C6040
10uF/ 25V
C6087
10uF/ 25V
C6039
0.1u/50V
R6016
15K
R6017
2.2K
C6042
0.1u
C6043
10uF/25V
C6105
100pF
9V3A
>200MA, 3A
C6099
10u/25V
C6100
0.1u
U6008
XC6209F502PR
C6111
2.2uF
C6107
0.1u
R6090
47K
C6102
1000p
C6083
NC
U6005
XC6209F502PR
C6058
10u/25V
C6057
0.1u
R6039
47K
C6052
1000p
C6066
NC
5VD
L6032
C6082
BLM18PG181SN1D(NC)
0.1u
TP6010
L6033
BLM18PG181SN1D
5VA_RX
C6045
2.2uF
U6001
RP102N331B
VDD
VOUT
GND
CE
NC
3V3A_RX
TP6011
C6046
2.2uF
C6047
0.1u
C6048
220p
C6080
2.2uF
C6049
0.1u
L6016
BLM18PG181SN1D
R6071
NC
Q6016
2SB1132
R6068
47k
R6048
4.7K
Q6017
DTC114EE
RX
5VA_RXIF
C6055
2.2uF/10V
C6059
0.1u
Q6007
2SB1132
9V1A_RX
C6053
10u/25V
C6060
0.1u
R6042
47k
R6045
4.7K
C6054
1000p
C6061
10u/25V
Q6009
DTC114EE
RX
L6034
5VA_TX
BLM18PG181SN1D
TP6013
U6010
RP102N331B
VDD
VOUT
GND
CE
NC
3V3A_TX
TP6014
C6067
2.2uF
C6068
2.2uF
C6069
0.1u
C6070
220p
C6065
10u/25V
C6075
0.1u
U6009
XC6209F502PR
C6081
2.2uF
C6071
0.1u
R6055
47K
C6074
1000p
C6072
NC
5VD
L6035
C6086
BLM18PG181SN1D(NC)
0.1u

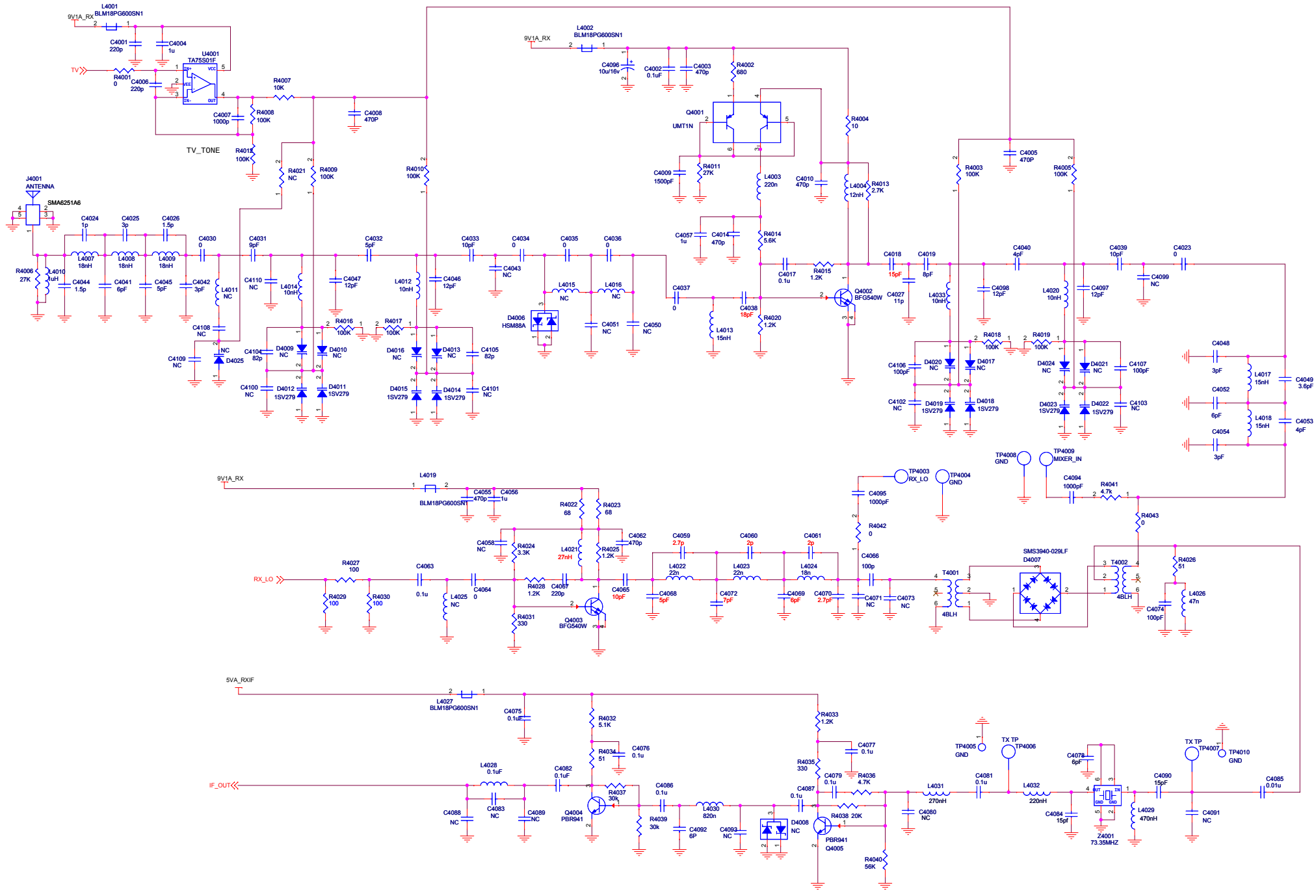

L6017
BLM41PG600SN1
B+
>200MA,1A
D6021 BAV70
R6040
0
C6050 2200UF
C6113 330UF
C6106 330UF
C6119 470p
3V3D
R6043
10K
add D814 D815 (ISR154-400)
J6003
JK_FAN1
D6022
B340A-F
D6025
B340A-F
>200MA,1A
D6010
BAV70
>200MA,1A
R6047 33
C6118
100p
3V3D
R6046 10K
FAN_STOP_DET
R6072 100
Q6005
DTC114EE
D6026
PMEG6010CEJ
Q6000
FZT651
C6129
0.1uF
FAN1
R6070
470
R6073
10K


TX PLL
5VA_TX
3V3A_TX
Fback_TX
TX_PLL_LD
CV_TX
TP1006 GND
TP1005 CVTX
TX_FLControl
MOD
mod1
U1000 sky72310
VCCecl/cml
Fvco_main
Fvco_main
LD/PS_main
VCCcp_main
CPout_main
N/C
Xtalacgnd/OSC
Xtalin/OSC
Xtalout/NC
VCCxtal
GNDXtal
Mux_out
N/C1
Clock
CS
Data
VCCdigital
N/C2
N/C3
N/C4
N/C5
N/C6
N/C7
PowerPAD
TX_PLL_CLK
TX_PLL_CS
TX_PLL_DATA
U1002 TS5A3159DCKR
COM
NC
Vcc GND
IN
NO
U1004 FSA66P5X
Vcc
Vin
OUT
ON/OFF
GND
X1000 TKL3273A
VCC
VCONT
OUT
GND
TX_RF_CS
TX_FLControl1
BAS16XV2T1G
RB520S-30


RX PLL
5VA_RX
3V3A_RX
Fback_RX
RX_PLL_LD
CV_RX
TP1008 Fin
TP1007 GND
TP1013 CVRX
RX_FLControl
U1006 sky72310
VCCecl/cml
Fvco_main
Fvco_main
LD/PS_main
VCCcp_main
CPout_main
N/C
Xtalacgnd/OSC
Xtalin/OSC
Xtalout/NC
VCCxtal
GNDXtal
Mux_out
N/C1
Clock
CS
Data
VCCdigital
N/C2
N/C3
N/C4
N/C5
N/C6
N/C7
PowerPAD
RX_PLL_CLK
RX_PLL_CS
RX_PLL_DATA
U1007 TS5A3159DCKR
COM
NC
Vcc GND
IN
NO
U1005 FSA66P5X
Vcc
Vin
OUT
ON/OFF
GND
X1001 TKL3273A
VCC
VCONT
OUT
GND
RX_RF_CS
RX_FLControl1
BAS16XV2T1G
RB520S-30


TX VCO
RX VCO
Q2001 UMC4(NTR)
Q2004 UMC4(NTR)
Q2002 2SC4617
Q2003 2SC5010
Q2007 2SC5010
Q2005 PBR941
Q2006 uPC8179TB
Q2010 UMC4(NTR)
Q2015 UMC4(NTR)
Q2009 2SC4617
Q2011 2SC5010
Q2014 2SC5010
Q2012 PBR941
Q2013 uPC8179TB
Q2018
Q2017
BLM18AG601SN1
BAS16XV2T1G
TX_VCO_L
TX_VCO_H
RX_VCO_L
RX_VCO_H
Fback_TX
Fback_RX
CV_TX
CV_TX_Pre
CV_RX
CV_RX_Pre
CV_Pre_RT
CV_RX_Pre_DAC
CV_TX_Pre
mod1
9V1A_TX
9V1A_RX
3V3A_TX
3V3A_RX
5VA_TX
5VA_RX
TX_LO
RX_LO
TP2000 TXLO
TP2001 RXLO
601SN1
1SV305
BB145B
uPC8179TB
74


B+
TP3001
J3001
ANTENNA
SMA6251A6
D3006
NC
D3005
NC
M3001 Directional Couple
Fcouple
Pin
Pout
5
Rcouple
更改为U1定耦
新增
匹配形式更改
PCB电感封装更改
PD850S35
Q3001
TP3002
Final_bias
TP3003
9V1A_TX
APC_COMP
VGG
TX_LO
REV_TEMP_DET
TEMP_DET
APC
9V3A
U3001
AD8566
compatible AD8566
U3002
TA75W01FU
U3003
NJM2904V
D3001
RB706F
D3002
RB706F
D3003
UDZS175.1B
Q3003
BFG540W
D3004
DAN222
D8014
1SS390
TP3005
REV_TEMP_OUT
TP3006
VGG
TP3008
TEMP
RT3001
100k
TP3012
TP3013
TP3011
TP3014
TP3015
TP3018
TP3016
TP3017
TP3019
TP3020
TP3021
TP3022


L4001
BLM18PG600SN1
9V1A_RX
C4001
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C4004
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U4001
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R4001
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220p
R4007
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C4007
1000p
R4008
100K
C4008
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R4021
NC
R4009
100K
R4010
100K
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C4014
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R4014
5.6K
C4017
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R4015
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R4003
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R4005
100K
J4001
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C4026
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C4033
10pF
C4034
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C4035
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C4036
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C4037
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C4038
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C4027
11p
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4pF
C4039
10pF
C4023
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C4098
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C4097
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L4008
18nH
L4009
18nH
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D4006
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L4016
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D4015
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D4017
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D4018
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3.6pF
C4053
4pF
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TP4009
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4.7k
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C4056
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R4023
68
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RX_LO
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GND
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100p
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NC
R4024
3.3K
L4021
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R4025
1.2K
C4062
470p
C4059
2.7p
C4060
2p
C4061
2p
RX_LO
R4027
100
R4029
100
R4030
100
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L4025
NC
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C4065
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R4031
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Q4003
BFG540W
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5pF
C4072
7pF
L4022
22n
L4023
22n
L4024
18n
C4069
6pF
C4070
2.7pF
C4071
NC
C4073
NC
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4BLH
SMS3940-029LF
D4007
T4002
4BLH
R4026
51
L4026
47n
C4074
100pF
5VA_RXIF
L4027
BLM18PG600SN1
C4075
0.1uF
R4032
5.1K
R4034
51
C4076
0.1u
R4033
1.2K
C4077
0.1u
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L4028
0.1uF
C4082
0.1uF
R4037
30k
C4086
0.1u
R4035
330
C4079
0.1u
R4036
4.7K
C4087
0.1u
L4031
270nH
C4081
0.1u
L4032
220nH
C4078
6pF
C4084
15pF
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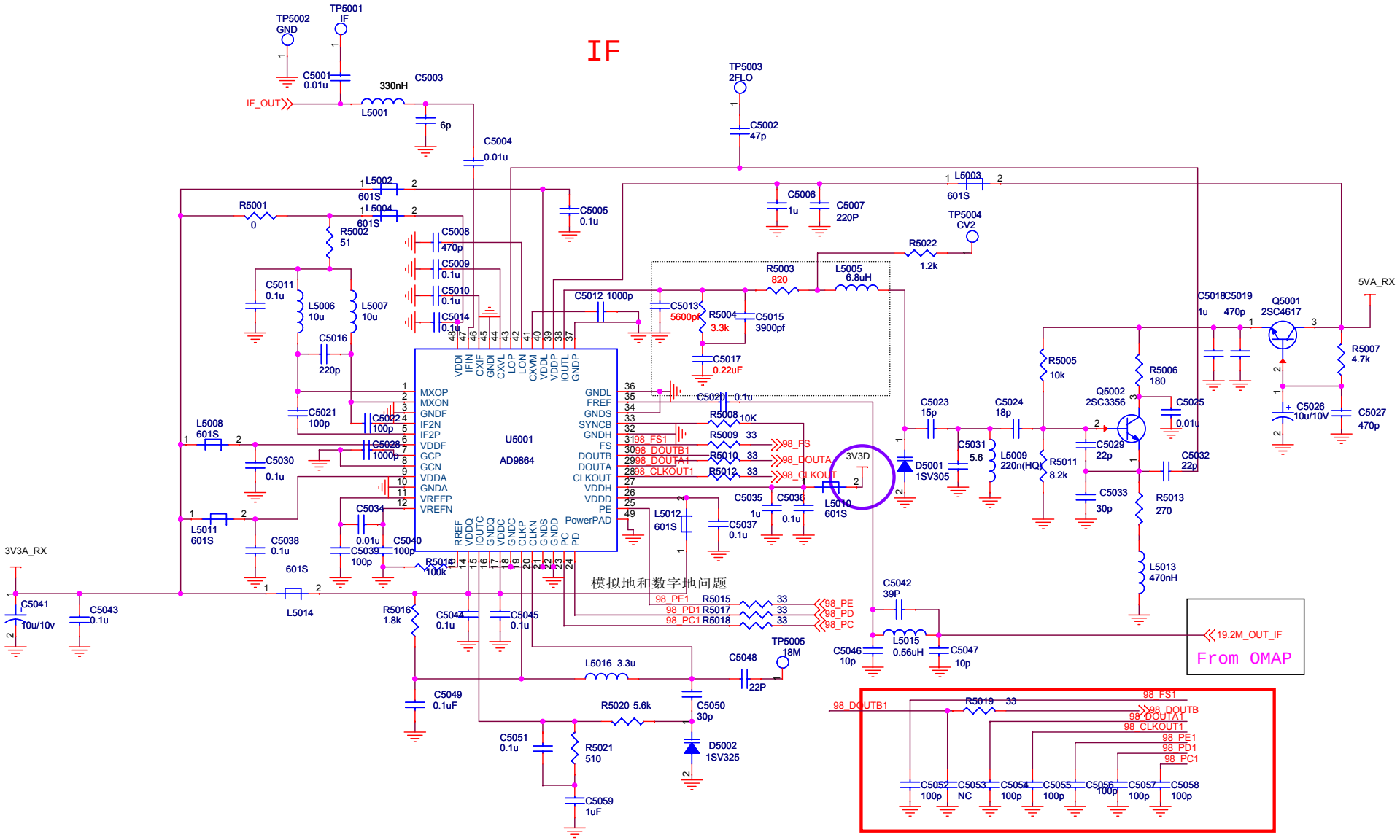
73.35MHZ
C4090
15pF
C4091
NC
C4085
0.01u
L4029
470nH
TP4005
GND
TX TP
TP4006
TX TP
TP4007
TP4010
GND
C4088
NC
C4083
NC
C4089
NC
Q4004
PBR941
R4039
30k
L4030
820n
C4092
6P
C4093
NC
D4008
NC
R4038
20K
PBR941
Q4005
R4040
56K
C4080
NC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C5003
IF_OUT
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6p
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TP5003 2FLO
C5002 47p
L5002 601S
L5004 601S
L5003 601S
R5001 0
R5002 51
C5005 0.1u
C5006 1u
C5007 220P
TP5004 CV2
R5022 1.2k
R5003 820
L5005 6.8uH
C5008 470p
C5009 0.1u
C5010 0.1u
C5014 0.1u
C5011 0.1u
L5006 10u
L5007 10u
C5016 220p
C5012 1000p
C5013 5600pf
R5004 3.3k
C5015 3900pf
C5017 0.22uF
C5018 1u
C5019 470p
Q5001 2SC4617
5VA_RX
R5007 4.7k
C5026 10u/10V
C5027 470p
R5005 10k
Q5002 2SC3356
R5006 180
C5025 0.01u
C5023 15p
C5024 18p
C5029 22p
C5032 22p
C5033 30p
R5013 270
L5013 470nH
C5031 5.6
L5009 220n(HQ)
R5011 8.2k
D5001 1SV305
3V3D
L5010 601S
C5035 1u
C5036 0.1u
C5037 0.1u
L5012 601S
C5021 100p
C5022 100p
C5028 1000p
C5030 0.1u
L5008 601S
L5011 601S
C5038 0.1u
C5034 0.01u
C5039 100p
C5040 100p
R5014 100k
C5041 10u/10v
C5043 0.1u
3V3A_RX
L5014 601S
R5016 1.8k
C5044 0.1u
C5045 0.1u
C5042 39P
L5015 0.56uH
C5046 10p
C5047 10p
19.2M_OUT_IF
From OMAP
TP5005 18M
C5048 22P
L5016 3.3u
C5049 0.1uF
C5050 30p
R5020 5.6k
C5051 0.1u
R5021 510
C5059 1uF
D5002 1SV325
U5001
AD9864
MXOP
MXON
GNDF
IF2N
IF2P
VDDF
GCP
GCN
VDDA
GNDA
VREFP
VREFN
VDDI
IFIN
CXIF
GNDI
CXVL
LOP
LON
CXVM
VDDL
VDDP
IOUTL
GNDP
GNDL
FREF
GNDS
SYNCB
GNDH
FS
DOUTB
DOUTA
CLKOUT
VDDH
VDDD
PE
PowerPAD
RREF
VDDQ
IOUTC
GNDQ
VDDC
GNDC
CLKP
CLKN
GNDS
GNDD
PC
PD
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98_DOUTB1
98_DOUTA1
98_CLKOUT1
98_FS
98_DOUTA
98_CLKOUT
R5008 10K
R5009 33
R5010 33
R5012 33
98_PE1
98_PD1
98_PC1
R5015 33
R5017 33
R5018 33
98_PE
98_PD
98_PC
模拟地和数字地问题
R5019 33
C5052 100p
C5053 NC
C5054 100p
C5055 100p
C5056 100p
C5057 100p
C5058 100p

12. Parts List

No.	Ref No.	Print No.	Part No.	Description
1	C1000	T4H	3104994750060	4.7uF
2	C1001	T4H	3101054710010	470PF
3	C1002	T4H	3101054710010	470PF
4	C1003	T4H	3101051050160	1UF
5	C1004	B5G	3101050400010	4PF
6	C1005	B5H	3101050600010	6PF
7	C1006	B5H	3101050100030	1PF
8	C1007	B5H	3101050600010	6PF
9	C1008	T5H	3101051040010	0.1UF
10	C1009	T4H	3101051020010	1000PF
11	C1011	B5H	3101051200020	12PF
12	C1012	B5H	3101051200020	12PF
13	C1014	T5H	3101051040010	0.1UF
14	C1015	T5H	3101051010030	100PF
15	C1016	T4H	3101051010030	100PF
16	C1017	T4H	3101051040010	0.1UF
17	C1018	T4H	3101054710010	470PF
18	C1019	T4H	3101051520000	1500PF
19	C1022	T5H	3101051040010	0.1UF
20	C1023	T4H	3101051010030	100PF
21	C1024	T4H	3101066830000	68000PF
22	C1025	T4H	3101061230000	0.012UF
23	C1026	T4H	3101062230020	0.022UF
24	C1028	T5H	3101051010030	100PF
25	C1029	T5H	3101051010030	100PF
26	C1030	T4H	3101061040020	0.1UF
27	C1032	T5H	3101051020010	1000PF
28	C1033	T4H	3101054710010	470PF
29	C1034	T4H	3101051020010	1000PF
30	C1035	T5H	3101051000020	10PF
31	C1037	T4G	3104991060060	10uF
32	C1038	T4I	3101051040010	0.1UF
33	C1039	T4G	3101051040010	0.1UF
34	C1040	T4I	3101051020010	1000PF
35	C1043	T5F	3101053310030	330PF
36	C1044	T5G	3101053300000	33PF
37	C1045	T5F	3101053320010	3300PF
38	C1046	T5H	3101051010030	100PF
39	C1047	T5H	3101051510000	150PF
40	C1049	T4H	3101051020010	1000PF

No.	Ref No.	Print No.	Part No.	Description
41	C1050	T4H	3101051040010	0.1UF
42	C1053	T4H	3101051020010	1000PF
43	C1054	T9B	3101051020010	1000PF
44	C1057	T4H	3101051040010	0.1UF
45	C1058	T9B	3101051040010	0.1UF
46	C1060	T4H	3110071040000	0.1UF
47	C1061	T4H	3110071040000	0.1UF
48	C1063	T4H	3110071040000	0.1UF
49	C1064	T4H	3110071040000	0.1UF
50	C1065	T4H	3110071040000	0.1UF
51	C1066	T4H	3110071040000	0.1UF
52	C1067	T4H	3110071040000	0.1UF
53	C1069	T4H	3110071040000	0.1UF
54	C1070	T4H	3110071040000	0.1UF
55	C1071	T4H	3110071040000	0.1UF
56	C1072	T4H	3110071040000	0.1UF
57	C1077	T4H	3101051020010	1000PF
58	C1078	T9B	3101054710010	470PF
59	C1079	T9B	3101051040010	0.1UF
60	C1080	B9C	3101050200010	2PF
61	C1081	B8C	3101050500010	5PF
62	C1082	B8C	3101052490010	2.4PF
63	C1083	B8B	3101050500010	5PF
64	C1085	T8B	3101051040010	0.1UF
65	C1086	T4I	3101051020010	1000PF
66	C1089	B8C	3101052400010	24PF
67	C1090	T9A	3101054710010	470PF
68	C1091	B8C	3101052400010	24PF
69	C1092	T8B	3101051040010	0.1UF
70	C1093	T8B	3101051010030	100PF
71	C1094	T9B	3101051040010	0.1UF
72	C1095	T9B	3101051010030	100PF
73	C1096	T9B	3101054710010	470PF
74	C1097	T9B	3101051520000	1500PF
75	C1098	T8B	3101051040010	0.1UF
76	C1099	T9B	3101061040020	0.1UF
77	C1100	T9B	3101066830000	68000PF
78	C1101	T9B	3101061230000	0.012UF
79	C1102	T9B	3101062230020	0.022UF
80	C1103	T9B	3101051020010	1000PF
81	C1104	T8B	3101051010030	100PF
82	C1105	T8B	3101051010030	100PF

No.	Ref No.	Print No.	Part No.	Description
83	C1106	T8B	3101051010030	100PF
84	C1107	T8B	3101051020010	1000PF
85	C1108	T8B	3101054710010	470PF
86	C1110	T8B	3101051000020	10PF
87	C1112	T9C	3104991060060	10uF
88	C1113	T9B	3101051020010	1000PF
89	C1114	T9C	3101051040010	0.1UF
90	C1115	T9B	3101051040010	0.1UF
91	C1116	T9B	3101051020010	1000PF
92	C1119	T8B	3101051010030	100PF
93	C1120	T8B	3101051510000	150PF
94	C1122	T9B	3101051020010	1000PF
95	C1127	T9A	3101051520000	1500PF
96	C1128	T9A	3101051040010	0.1UF
97	C1129	T9B	3110071040000	0.1UF
98	C1130	T9B	3110071040000	0.1UF
99	C1131	T9B	3110071040000	0.1UF
100	C1132	T9B	3110071040000	0.1UF
101	C1133	T9B	3110071040000	0.1UF
102	C1134	T9B	3110071040000	0.1UF
103	C1136	T9B	3110071040000	0.1UF
104	C1138	T9B	3110071040000	0.1UF
105	C1139	T9B	3110071040000	0.1UF
106	C1140	T9B	3110071040000	0.1UF
107	C1141	T9B	3110071040000	0.1UF
108	C2000	B4H	3101054710010	470PF
109	C2001	B4H	3101051040010	0.1UF
110	C2002	B4I	3101051040010	0.1UF
111	C2003	B4I	3101054710010	470PF
112	C2004	B4H	3101052210010	220PF
113	C2006	B4G	3101054710010	470PF
114	C2007	B4H	3101060600010	6PF
115	C2008	B4G	3101054710010	470PF
116	C2010	B4H	3101060400010	4PF
117	C2011	B4G	3104994750060	4.7uF
118	C2012	B5G	3101051040010	0.1UF
119	C2013	B4H	3101050800000	8PF
120	C2014	B4H	3101064790010	4.7PF
121	C2015	B4H	3101052200010	22PF
122	C2017	B4H	3101052210010	220PF
123	C2018	B4H	3101060590060	0.5PF
124	C2019	B4H	3101054700010	47PF

No.	Ref No.	Print No.	Part No.	Description
125	C2020	B4H	3101062490000	2.4PF
126	C2021	B4H	3101051200020	12PF
127	C2022	T4G	3101054710010	470PF
128	C2023	T4G	3101051040010	0.1UF
129	C2024	B4G	3101051040010	0.1UF
130	C2027	T5G	3101051040010	0.1UF
131	C2028	T4G	3101054710010	470PF
132	C2029	T5G	3101054710010	470PF
133	C2030	T4G	3101050300000	3PF
134	C2031	T4G	3101050300000	3PF
135	C2032	T4G	3101054710010	470PF
136	C2033	T5G	3101051040010	0.1UF
137	C2035	T4G	3101052200010	22PF
138	C2036	T4G	3101052200010	22PF
139	C2037	T4G	3101052490010	2.4PF
140	C2038	T4G	3101053690000	3.6PF
141	C2039	B4H	3101051040010	0.1UF
142	C2041	T4G	3101050400010	4PF
143	C2042	T4G	3101052200010	22PF
144	C2043	T4G	3101062200010	22PF
145	C2047	B4H	3101074750000	4.7UF
146	C2048	B5G	3101054710010	470PF
147	C2049	B5G	3101051040010	0.1UF
148	C2050	T5G	3101052200010	22PF
149	C2051	T5G	3101051040010	0.1UF
150	C2053	T4G	3101062250000	2.2UF
151	C2054	B4H	3101051040010	0.1UF
152	C2057	B4G	3101052210010	220PF
153	C2058	B4G	3101051040010	0.1UF
154	C2059	B4G	3101054710010	470PF
155	C2061	B4H	3101060600010	6PF
156	C2062	B4G	3101060590060	0.5PF
157	C2063	B4G	3101063690000	3.6PF
158	C2064	B4G	3101050700010	7PF
159	C2066	B4G	3101060300010	3PF
160	C2067	B4G	3101052700000	27PF
161	C2068	B4G	3101054700010	47PF
162	C2069	B4H	3101052210010	220PF
163	C2071	B4G	3101062790000	2.7PF
164	C2072	B4G	3101051800070	18PF
165	C2073	B9B	3101054710010	470PF
166	C2074	B9B	3101051040010	0.1UF

No.	Ref No.	Print No.	Part No.	Description
167	C2075	B8B	3101054710010	470PF
168	C2076	B8B	3101054710010	470PF
169	C2077	B9B	3101054710010	470PF
170	C2078	B9B	3101051040010	0.1UF
171	C2079	B8B	3104994750060	4.7uF
172	C2080	B9B	3101052210010	220PF
173	C2081	B9B	3101054710010	470PF
174	C2082	B9B	3101051040010	0.1UF
175	C2083	B9C	3101060800010	8PF
176	C2084	B9C	3101050600010	6PF
177	C2086	B8B	3101051040010	0.1UF
178	C2087	B9B	3101051000020	10PF
179	C2088	B9B	3101050600010	6PF
180	C2089	B9B	3101053900000	39PF
181	C2090	B9C	3101052210010	220PF
182	C2092	B9B	3101063690000	3.6PF
183	C2093	B9C	3101055600000	56PF
184	C2094	B9C	3101052700000	27PF
185	C2095	T9C	3101054710010	470PF
186	C2096	T9C	3101051040010	0.1UF
187	C2097	T8C	3101050300000	3PF
188	C2098	T8C	3101050300000	3PF
189	C2099	B8C	3101054710010	470PF
190	C2100	T9C	3101053300000	33PF
191	C2101	B8C	3101051040010	0.1UF
192	C2102	T8C	3101053300000	33PF
193	C2103	T9C	3101053300000	33PF
194	C2104	T9C	3101053300000	33PF
195	C2105	B9C	3101052210010	220PF
196	C2106	T9D	3101053690000	3.6PF
197	C2107	T8D	3101050600010	6PF
198	C2108	T8D	3101050500010	5PF
199	C2109	T9C	3101053300000	33PF
200	C2110	B9C	3101051040010	0.1UF
201	C2111	B9C	3101054710010	470PF
202	C2112	B9C	3101060800010	8PF
203	C2114	B9C	3101060400010	4PF
204	C2119	B9C	3101050800000	8PF
205	C2121	B9C	3101064790010	4.7PF
206	C2122	B9C	3101060300010	3PF
207	C2123	B9C	3101052700000	27PF
208	C2124	B9C	3101052210010	220PF

No.	Ref No.	Print No.	Part No.	Description
209	C2125	B9C	3101055600000	56PF
210	C2127	B9C	3101052000020	20PF
211	C2128	T9C	3101054710010	470PF
212	C2129	T9C	3101054710010	470PF
213	C2130	B9B	3101054710010	470PF
214	C2131	B9B	3101051040010	0.1UF
215	C2132	B9A	3101051040010	0.1UF
216	C2140	B5G	3101054710010	470PF
217	C2141	B5G	3101051040010	0.1UF
218	C2142	B4G	3101051040010	0.1UF
219	C2143	B4G	3101054710010	470PF
220	C2149	T9C	3101054710010	470PF
221	C2150	T9C	3101051040010	0.1UF
222	C2157	T9C	3101062250000	2.2UF
223	C2158	T9C	3101051040010	0.1UF
224	C2159	T9C	3101051040010	0.1UF
225	C2160	T8C	3101051040010	0.1UF
226	C3014	T2C	3101061540000	0.15UF
227	C3015	T2C	3101061220000	1200PF
228	C3016	T2C	3101061040020	0.1UF
229	C3017	T2C	3101064700000	47PF
230	C3018	T2C	3101081020010	1000PF
231	C3019	T2C	3101084710010	470PF
232	C3020	T2B	3101083900010	39PF
233	C3021	T2B	3101062710000	270PF
234	C3022	T2B	3101064710000	470PF
235	C3023	T2C	3101062200010	22PF
236	C3024	T2B	3101092260010	22UF
237	C3025	T2B	3101063320000	3300PF
238	C3026	T2B	3101061830000	0.018UF
239	C3027	T2B	3101063300000	33PF
240	C3028	T2B	3101061220000	1200PF
241	C3029	T2B	3101063320000	3300PF
242	C3030	T2C	3101062210000	220PF
243	C3031	T2B	3101081020010	1000PF
244	C3032	T2B	3101063320000	3300PF
245	C3033	T2B	3101066800000	68PF
246	C3034	T2F	3101370100000	1pF
247	C3035	T2F	3101371590000	1.5pF
248	C3038	T1D	3101371200000	12pF
249	C3040	T2D	3101373990000	3.9pF
250	C3043	T2E	3101371210000	120pF

No.	Ref No.	Print No.	Part No.	Description
251	C3045	T1E	3101371500000	15pF
252	C3046	T2D	3101378290000	8.2pF
253	C3047	T2D	3101375690000	5.6pF
254	C3051	T2E	3101370200000	2pF
255	C3052	T1F	3101370300000	3pF
256	C3055	T1C	3101373900000	39pF
257	C3056	T1F	3101373990000	3.9pF
258	C3060	T2G	3101061020000	1000PF
259	C3061	T1H	3101061020000	1000PF
260	C3065	T3C	3101064740000	0.47UF
261	C3066	T1G	3101051020010	1000PF
262	C3068	T3C	3101066830050	0.068UF
263	C3069	T3C	3101062240000	0.22UF
264	C3071	T3C	3210306479000	4.7nH
265	C3072	T2G	3101051020010	1000PF
266	C3073	T5E	3101061040020	0.1UF
267	C3074	T4E	3101081060010	10UF
268	C3075	T5E	3101061010010	100PF
269	C3076	T4E	3101061020000	1000PF
270	C3077	T4D	3210306479000	4.7nH
271	C3079	T4D	3101061040020	0.1UF
272	C3080	T4F	3101061020000	1000PF
273	C3082	T3G	3101061040020	0.1UF
274	C3083	T4D	3101062210000	220PF
275	C3084	T3G	3101054730000	0.047UF
276	C3085	T4F	3101061040020	0.1UF
277	C3086	T3G	3101051510000	150PF
278	C3088	T4F	3101061520010	1500PF
279	C3089	T2G	3101052210010	220PF
280	C3090	T3D	3101061010010	100PF
281	C3091	T4F	3101061520010	1500PF
282	C3092	T3D	3101061010010	100PF
283	C3095	T1G	3101052210010	220PF
284	C3096	T3E	3101061010010	100PF
285	C3097	T4E	3101061010010	100PF
286	C3099	T2G	3101052210010	220PF
287	C3101	T4E	3101060800010	8PF
288	C3103	T4F	3101066800000	68PF
289	C3104	T4F	3101051210000	120PF
290	C3105	T3F	3101061020000	1000PF
291	C3106	T3E	3101061020000	1000PF
292	C3108	T3H	3001053330010	33KΩ

No.	Ref No.	Print No.	Part No.	Description
293	C3109	T2H	3101052210010	220PF
294	C3110	T3C	3101061500010	15PF
295	C3113	T3G	3101052210010	220PF
296	C3114	T3H	3101052210010	220PF
297	C3115	T3H	3101061040020	0.1UF
298	C3116	T3H	3001051830000	18KΩ
299	C3117	T3C	3210306229000	2.2nH
300	C3120	T2G	3101061040020	0.1UF
301	C3121	T2G	3101052210010	220PF
302	C3122	T3D	3101068200040	82PF
303	C3123	T2D	3101052210010	220PF
304	C4001	T9F	3101052210010	220PF
305	C4002	T9G	3101051040010	0.1UF
306	C4003	T9G	3101052210010	220PF
307	C4004	T9F	3101061050020	1UF
308	C4005	T9G	3101054710010	470PF
309	C4006	T9G	3101052210010	220PF
310	C4007	T9F	3101051020010	1000PF
311	C4008	T9H	3101054710010	470PF
312	C4009	T9G	3101051040010	0.1UF
313	C4010	T9G	3101052210010	220PF
314	C4014	T9G	3101052210010	220PF
315	C4017	T8G	3101051040010	0.1UF
316	C4018	T8G	3101051500080	15PF
317	C4019	T8G	3101050800000	8PF
318	C4023	T9F	3001050000000	0Ω
319	C4024	T9I	3101050100030	1PF
320	C4025	T9I	3101050300000	3PF
321	C4026	T8I	3101051590000	1.5PF
322	C4027	T8G	3101051100010	11PF
323	C4030	T8H	3001050000000	0Ω
324	C4031	T8H	3101050900000	9PF
325	C4032	T8H	3101050500010	5PF
326	C4033	T8H	3101051000020	10PF
327	C4034	T8H	3001050000000	0Ω
328	C4035	T8H	3001050000000	0Ω
329	C4036	T8G	3001050000000	0Ω
330	C4037	T8G	3001050000000	0Ω
331	C4038	T8G	3101051800070	18PF
332	C4039	T9F	3101051000020	10PF
333	C4040	T8F	3101050400010	4PF
334	C4041	T9I	3101050600010	6PF

No.	Ref No.	Print No.	Part No.	Description
335	C4042	T8H	3101050300000	3PF
336	C4044	T9H	3101051590000	1.5PF
337	C4045	T9I	3101050500010	5PF
338	C4046	T8H	3101051200020	12PF
339	C4047	T8H	3101051200020	12PF
340	C4048	T9F	3101050300000	3PF
341	C4049	T9F	3101053690000	3.6PF
342	C4052	T9F	3101050600010	6PF
343	C4053	T9F	3101050400010	4PF
344	C4054	T9F	3101050300000	3PF
345	C4055	B9E	3101054710010	470PF
346	C4056	B9E	3101061050020	1UF
347	C4057	T9G	3101051050160	1UF
348	C4059	B9E	3101052790060	2.7PF
349	C4060	B9E	3101050200010	2PF
350	C4061	B9E	3101050200010	2PF
351	C4062	B9D	3101054710010	470PF
352	C4063	B9D	3101061040020	0.1UF
353	C4064	B9D	3001060000000	0Ω
354	C4065	B9E	3101051000020	10PF
355	C4066	B9F	3101051010030	100PF
356	C4067	B9E	3101052210010	220PF
357	C4068	B9E	3101050500010	5PF
358	C4069	B9E	3101050600010	6PF
359	C4070	B9E	3101052790060	2.7PF
360	C4072	B9E	3101050700010	7PF
361	C4074	B9F	3101051010030	100PF
362	C4075	T9E	3101061040020	0.1UF
363	C4076	T9D	3101051040010	0.1UF
364	C4077	T9E	3101051040010	0.1UF
365	C4078	T9E	3101050600010	6PF
366	C4079	T9E	3101051040010	0.1UF
367	C4081	T9E	3101051040010	0.1UF
368	C4082	T9D	3101051040010	0.1UF
369	C4084	T9E	3101061500010	15PF
370	C4085	B9F	3101051030020	0.01UF
371	C4086	T9D	3101051040010	0.1UF
372	C4087	T9D	3101051040010	0.1UF
373	C4090	B9F	3101061500010	15PF
374	C4092	T9D	3101050600010	6PF
375	C4094	T9F	3101051020010	1000PF
376	C4095	B9E	3101051020010	1000PF

No.	Ref No.	Print No.	Part No.	Description
377	C4096	T9G	3101081060010	10UF
378	C4097	T8F	3101051200020	12PF
379	C4098	T8F	3101051200020	12PF
380	C4104	T9H	3101058200000	82PF
381	C4105	T9H	3101058200000	82PF
382	C4106	T9G	3101051010030	100PF
383	C4107	T9F	3101051010030	100PF
384	C5001	T8E	3101051030020	0.01UF
385	C5002	T8E	3101054700010	47PF
386	C5003	T8E	3101060600010	6PF
387	C5004	T8E	3101051030020	0.01UF
388	C5005	T8D	3101051040010	0.1UF
389	C5006	T8D	3101061050020	1UF
390	C5007	T8D	3101052210010	220PF
391	C5008	T8E	3101054710010	470PF
392	C5009	T8E	3101051040010	0.1UF
393	C5010	T8E	3101051040010	0.1UF
394	C5011	T8E	3101051040010	0.1UF
395	C5012	T8E	3101051020010	1000PF
396	C5013	T8D	3101055620010	5600PF
397	C5014	T8E	3101051040010	0.1UF
398	C5015	T8D	3101053920000	3900PF
399	C5016	T8E	3101062210000	220PF
400	C5017	T8D	3101062240000	0.22UF
401	C5018	B8D	3101051050160	1UF
402	C5019	B8E	3101054710010	470PF
403	C5020	T8D	3101051040010	0.1UF
404	C5021	T8E	3101051010030	100PF
405	C5022	T8E	3101051010030	100PF
406	C5023	B8D	3101051500080	15PF
407	C5024	B8D	3101051800070	18PF
408	C5025	B8E	3101051030020	0.01UF
409	C5026	B8E	3104991060060	10uF
410	C5027	B8E	3101054710010	470PF
411	C5028	T8E	3101051020010	1000PF
412	C5029	B8E	3101052200010	22PF
413	C5030	T8E	3101051040010	0.1UF
414	C5031	B8D	3101055690020	5.6PF
415	C5032	B8E	3101052200010	22PF
416	C5033	B8E	3101053000010	30PF
417	C5034	T8E	3101051030020	0.01UF
418	C5035	T8D	3101051050160	1UF

No.	Ref No.	Print No.	Part No.	Description
419	C5036	T8D	3101051040010	0.1UF
420	C5037	T8D	3101051040010	0.1UF
421	C5038	T8E	3101051040010	0.1UF
422	C5039	T8E	3101051010030	100PF
423	C5040	T8E	3101051010030	100PF
424	C5041	T8E	3104991060060	10uF
425	C5042	T8D	3101053900000	39PF
426	C5043	T8E	3101051040010	0.1UF
427	C5044	T8E	3101051040010	0.1UF
428	C5045	T8E	3101051040010	0.1UF
429	C5046	T8D	3101051000020	10PF
430	C5047	T8D	3101051000020	10PF
431	C5048	B8D	3101052200010	22PF
432	C5049	B8E	3101051040010	0.1UF
433	C5050	B8D	3101053000010	30PF
434	C5051	B8E	3101061040020	0.1UF
435	C5052	T8D	3101051010030	100PF
436	C5054	T8D	3101051010030	100PF
437	C5055	T8D	3101051010030	100PF
438	C5056	T8D	3101051010030	100PF
439	C5057	T8D	3101051010030	100PF
440	C5058	T8E	3101051010030	100PF
441	C5059	B8E	3101071050010	1UF
442	C6001	B7C	3101061050020	1UF
443	C6002	T6B	3101051030020	0.01UF
444	C6003	T6B	3101051020010	1000PF
445	C6004	T7C	3110992270000	220UF
446	C6005	T7C	3101082260020	22UF
447	C6006	T7B	3101092260010	22UF
448	C6007	T7C	3101051040010	0.1UF
449	C6008	T7B	3101092260010	22UF
450	C6009	T6B	3101068220000	8200PF
451	C6010	T6B	3101061040110	0.1UF
452	C6011	T6B	3101068220000	8200PF
453	C6012	T6B	3101051020010	1000PF
454	C6013	B6B	3101062250000	2.2UF
455	C6014	T7B	3101061040110	0.1UF
456	C6015	B7B	3101051040010	0.1UF
457	C6016	B7C	3101071060000	10UF
458	C6017	T5A	3101061040110	0.1UF
459	C6018	T5A	3101054710010	470PF
460	C6019	B7B	3101082260020	22UF

No.	Ref No.	Print No.	Part No.	Description
461	C6020	B6B	3101051030020	0.01UF
462	C6021	B6B	3101061050020	1UF
463	C6022	B5F	3101051040010	0.1UF
464	C6023	B7B	3101071060000	10UF
465	C6024	B6B	3101061050020	1UF
466	C6025	B6B	3101051030020	0.01UF
467	C6026	B6C	3101082260020	22UF
468	C6027	B6C	3101051040010	0.1UF
469	C6028	B6C	3101061050020	1UF
470	C6029	B6C	3101051030020	0.01UF
471	C6031	T8A	3101061040110	0.1UF
472	C6032	T7A	3101051020010	1000PF
473	C6033	B7C	3101082260020	22UF
474	C6034	B7C	3101051040010	0.1UF
475	C6035	B7C	3101061050020	1UF
476	C6036	B7C	3101051030020	0.01UF
477	C6037	T5E	3101081060010	10UF
478	C6038	T4E	3101051020010	1000PF
479	C6039	T4D	3101061040110	0.1UF
480	C6040	T4D	3101081060010	10UF
481	C6041	B6F	3101051040010	0.1UF
482	C6042	T5E	3101051040010	0.1UF
483	C6043	T5E	3101081060010	10UF
484	C6044	B6B	3101051040010	0.1UF
485	C6045	T8C	3101062250000	2.2UF
486	C6046	T8C	3101062250000	2.2UF
487	C6047	T8C	3101051040010	0.1UF
488	C6048	T8C	3101052210010	220PF
489	C6049	T8C	3101051040010	0.1UF
490	C6052	T8B	3101051020010	1000PF
491	C6053	T8B	3101081060010	10UF
492	C6054	T8C	3101051020010	1000PF
493	C6055	T8C	3101062250000	2.2UF
494	C6056	T5E	3101051040010	0.1UF
495	C6057	T8B	3101051040010	0.1UF
496	C6058	T8B	3101081060010	10UF
497	C6059	T7C	3101051040010	0.1UF
498	C6060	T8B	3101051040010	0.1UF
499	C6061	T8C	3101081060010	10UF
500	C6065	T5E	3101081060010	10UF
501	C6067	T5F	3101062250000	2.2UF
502	C6068	T4F	3101062250000	2.2UF

No.	Ref No.	Print No.	Part No.	Description
503	C6069	T4F	3101051040010	0.1UF
504	C6070	T4F	3101052210010	220PF
505	C6071	T5F	3101051040010	0.1UF
506	C6074	T5F	3101051020010	1000PF
507	C6075	T5F	3101051040010	0.1UF
508	C6078	T5A	3101053300000	33PF
509	C6080	T8C	3101062250000	2.2UF
510	C6081	T5F	3101062250000	2.2UF
511	C6082	T8C	3101051040010	0.1UF
512	C6086	T5F	3101051040010	0.1UF
513	C6087	T4D	3101081060010	10UF
514	C6088	T5B	3103993370000	330UF
515	C6089	T4B	3101068220000	8200PF
516	C6090	T4C	3101051040010	0.1UF
517	C6091	T4C	3101051010030	100PF
518	C6093	T4B	3101061040110	0.1UF
519	C6094	T4B	3101051030020	0.01UF
520	C6095	T4B	3101092260010	22UF
521	C6096	T4B	3101092260010	22UF
522	C6097	T5B	3101061040110	0.1UF
523	C6098	T4B	3101068220000	8200PF
524	C6099	T8G	3101081060010	10UF
525	C6100	T8H	3101051040010	0.1UF
526	C6101	T4C	3101092260010	22UF
527	C6102	T8H	3101051020010	1000PF
528	C6105	T5E	3101051010030	100PF
529	C6106	B5B	3103993370000	330UF
530	C6107	T8H	3101051040010	0.1UF
531	C6109	B6B	3101062250000	2.2UF
532	C6110	B6B	3101052210010	220PF
533	C6111	T8H	3101062250000	2.2UF
534	C6112	T8H	3101051020010	1000PF
535	C6113	B5C	3103993370000	330UF
536	C6114	T5B	3101064720000	4700PF
537	C6115	T8H	3101052210010	220PF
538	C6116	T8H	3101062250000	2.2UF
539	C6117	T8H	3101062250000	2.2UF
540	C6118	B4C	3101051010030	100PF
541	C6119	B4B	3101064710000	470PF
542	C6120	T5B	3101061510050	150PF
543	C6129	B5C	3101061040110	0.1UF
544	C7001	B6G	3101051040010	0.1UF

No.	Ref No.	Print No.	Part No.	Description
545	C7006	B6G	3101082260020	22UF
546	C7007	B5G	3101061050020	1UF
547	C7008	B5G	3101051040010	0.1UF
548	C7009	B5G	3101051010030	100PF
549	C7010	B6H	3101051040010	0.1UF
550	C7011	B6H	3101051040010	0.1UF
551	C7012	B6H	3101051040010	0.1UF
552	C7013	B6H	3101051040010	0.1UF
553	C7014	B6G	3101051040010	0.1UF
554	C7015	B6G	3101051040010	0.1UF
555	C7016	T6G	3101051010030	100PF
556	C7017	T6F	3101051010030	100PF
557	C7018	T6F	3101051010030	100PF
558	C7019	T6H	3101051010030	100PF
559	C7020	T6H	3101051010030	100PF
560	C7021	T6G	3101051010030	100PF
561	C7022	T6F	3101051010030	100PF
562	C7023	T6H	3101051010030	100PF
563	C7024	T6H	3101051010030	100PF
564	C7025	B6G	3101054700010	47PF
565	C7026	T7E	3101051030020	0.01UF
566	C7027	B7E	3101081060010	10UF
567	C7028	T7E	3101051040010	0.1UF
568	C7029	B6G	3101054700010	47PF
569	C7030	T7E	3101053900000	39PF
570	C7031	T7E	3101051030020	0.01UF
571	C7032	T6F	3101051030020	0.01UF
572	C7033	T7E	3101058200000	82PF
573	C7034	T7E	3101058200000	82PF
574	C7035	T7E	3101058200000	82PF
575	C7036	T6F	3101051200020	12PF
576	C7037	T6F	3101054700010	47PF
577	C7038	T7E	3101061050020	1UF
578	C7039	T6F	3101051200020	12PF
579	C7041	B6G	3101051010030	100PF
580	C7042	B6G	3101051040010	0.1UF
581	C7043	B6G	3101051030020	0.01UF
582	C7044	B6G	3101082260020	22UF
583	C7045	B6G	3101051040010	0.1UF
584	C7046	B6G	3101051040010	0.1UF
585	C7047	B6G	3101051040010	0.1UF
586	C7048	B6G	3101051040010	0.1UF

No.	Ref No.	Print No.	Part No.	Description
587	C7049	B6G	3101051040010	0.1UF
588	C7050	B6G	3101051040010	0.1UF
589	C7051	B6G	3101051040010	0.1UF
590	C7052	B6G	3101054700010	47PF
591	C7058	T6G	3101051010030	100PF
592	C7059	B6G	3101051040010	0.1UF
593	C7062	B6E	3101051040010	0.1UF
594	C7063	B6E	3101051040010	0.1UF
595	C7064	B6E	3101051030020	0.01UF
596	C7065	B6E	3101051010030	100PF
597	C7066	T6F	3101051040010	0.1UF
598	C7067	T6F	3101051010030	100PF
599	C7068	B6G	3101051040010	0.1UF
600	C7069	B6G	3101051040010	0.1UF
601	C7070	B6G	3101051040010	0.1UF
602	C7071	B6G	3101051040010	0.1UF
603	C7072	B6G	3101051040010	0.1UF
604	C7077	B6G	3101051010030	100PF
605	C7078	B6G	3101051040010	0.1UF
606	C7079	B6G	3101051030020	0.01UF
607	C7080	B6G	3101082260020	22UF
608	C7081	B6G	3101061050020	1UF
609	C7082	T6I	3101051040010	0.1UF
610	C7087	T5D	3101082260020	22UF
611	C7088	T5D	3101061050020	1UF
612	C7089	B6D	3101051040010	0.1UF
613	C7090	B6D	3101051010030	100PF
614	C7091	B6E	3101051040010	0.1UF
615	C7092	B6E	3101051010030	100PF
616	C7093	B6E	3101051040010	0.1UF
617	C7094	B6E	3101051010030	100PF
618	C7095	B6E	3101051040010	0.1UF
619	C7096	B6E	3101051010030	100PF
620	C7097	B6E	3101051040010	0.1UF
621	C7098	T7D	3101051010030	100PF
622	C7099	T6D	3101051010030	100PF
623	C7100	T6D	3101051010030	100PF
624	C7101	T7D	3101051010030	100PF
625	C7102	T6D	3101051010030	100PF
626	C7103	T6D	3101051010030	100PF
627	C7104	T6D	3101051010030	100PF
628	C7105	T6D	3101051010030	100PF

No.	Ref No.	Print No.	Part No.	Description
629	C7106	T6D	3101051010030	100PF
630	C7107	T6D	3101051010030	100PF
631	C7110	T6D	3101051010030	100PF
632	C7111	T7E	3101051010030	100PF
633	C7112	T7E	3101051010030	100PF
634	C7113	T7D	3101051010030	100PF
635	C7114	T7D	3101051010030	100PF
636	C7117	T6D	3101051200020	12PF
637	C7118	T6D	3101051200020	12PF
638	C7119	B7E	3101051040010	0.1UF
639	C7120	B7E	3101051030020	0.01UF
640	C7121	T6F	3101051000020	10PF
641	C7122	B6D	3101051040010	0.1UF
642	C7123	B6D	3101051040010	0.1UF
643	C7124	B6E	3101051040010	0.1UF
644	C7125	T7D	3101051010030	100PF
645	C7128	T8G	3101051040010	0.1UF
646	C7129	B7D	3101051000020	10PF
647	C7130	B6D	3101082260020	22UF
648	C7131	B6D	3101051040010	0.1UF
649	C7132	T6E	3101051040010	0.1UF
650	C7133	B6E	3101051040010	0.1UF
651	C7135	T7F	3101051000020	10PF
652	C7136	T7D	3101051010030	100PF
653	C7137	T6E	3101051040010	0.1UF
654	C7140	B6G	3101051040010	0.1UF
655	C7141	B6G	3101051040010	0.1UF
656	C7142	B6G	3101051030020	0.01UF
657	C7143	B6G	3101051010030	100PF
658	C7144	T7D	3101051040010	0.1UF
659	C7145	B6D	3101051040010	0.1UF
660	C7146	B7E	3101051040010	0.1UF
661	C7147	B6E	3101051040010	0.1UF
662	C7148	B6D	3101051040010	0.1UF
663	C7149	B6D	3101051040010	0.1UF
664	C7154	B6D	3101051010030	100PF
665	C7155	B7D	3101051040010	0.1UF
666	C7156	B7D	3101051030020	0.01UF
667	C7157	B6D	3101082260020	22UF
668	C7158	B6E	3101061050020	1UF
669	C7193	B8C	3101051010030	100PF
670	C7194	B8C	3101051010030	100PF

No.	Ref No.	Print No.	Part No.	Description
671	C7195	B8C	3101051010030	100PF
672	C7196	B8C	3101051040010	0.1UF
673	C7197	B8B	3101052210010	220PF
674	C7198	B8B	3101052210010	220PF
675	C7200	B8C	3101052210010	220PF
676	C7201	B8C	3101052210010	220PF
677	C7202	B8B	3101052210010	220PF
678	C7203	B8B	3101052210010	220PF
679	C7204	B7C	3101052210010	220PF
680	C7205	B7B	3101052210010	220PF
681	C7206	B7B	3101052210010	220PF
682	C7207	B7B	3101052210010	220PF
683	C7208	T8A	3101061040110	0.1UF
684	C7209	B8B	3101052210010	220PF
685	C7211	B8B	3101052210010	220PF
686	C7212	B8B	3101052210010	220PF
687	C7213	B8B	3101052210010	220PF
688	C7214	B8B	3101052210010	220PF
689	C7222	T7C	3101061040110	0.1UF
690	C7223	B6D	3101061040110	0.1UF
691	C7224	T7D	3101061040110	0.1UF
692	C7225	T7D	3101061040110	0.1UF
693	C7226	B7D	3101061040110	0.1UF
694	C7227	T7E	3101051010030	100PF
695	C7228	T7E	3101051010030	100PF
696	C7248	B8B	3101052210010	220PF
697	C7249	B7B	3101052210010	220PF
698	C7250	T6B	3101051040010	0.1UF
699	C7401	B7H	3101064730000	0.047UF
700	C7402	B7I	3101061010010	100PF
701	C7403	B7H	3101061010010	100PF
702	C7404	B7I	3101061040110	0.1UF
703	C7405	B7H	3101064710000	470PF
704	C7406	B7H	3101064710000	470PF
705	C7407	B7I	3101061010010	100PF
706	C7408	B7I	3101061040110	0.1UF
707	C7409	B7H	3101064710000	470PF
708	C7410	B8H	3101064710000	470PF
709	C7411	B7H	3101064710000	470PF
710	C7412	B8H	3101064710000	470PF
711	C7417	B8H	3101064710000	470PF
712	C8001	T7F	3101051030020	0.01UF

No.	Ref No.	Print No.	Part No.	Description
713	C8002	T5F	3101051030020	0.01UF
714	C8003	T5F	3101051010030	100PF
715	C8004	T5F	3101051010030	100PF
716	C8005	T5F	3101051010030	100PF
717	C8007	T5F	3101051040010	0.1UF
718	C8008	T5F	3101071060000	10UF
719	C8009	T5F	3101051040010	0.1UF
720	C8010	T5F	3101051020010	1000PF
721	C8011	T5F	3101051040010	0.1UF
722	C8015	T6F	3101082260020	22UF
723	C8016	T6F	3101051040010	0.1UF
724	C8017	T6F	3101051020010	1000PF
725	C8025	T6F	3101054700010	47PF
726	C8026	T6F	3101054700010	47PF
727	C8027	T6F	3101054700010	47PF
728	C8031	T7F	3101071060000	10UF
729	C8033	T7F	3101051030020	0.01UF
730	C8034	T6F	3101051040010	0.1UF
731	C8035	T7F	3101051030020	0.01UF
732	C8036	T7F	3101051030020	0.01UF
733	C8037	T7F	3101051030020	0.01UF
734	C8038	T7F	3101051040010	0.1UF
735	C8039	T7F	3101051020010	1000PF
736	C8040	T7F	3101051040010	0.1UF
737	C8042	T7G	3101071060000	10UF
738	C8043	T7G	3101051040010	0.1UF
739	C8044	T7G	3101051020010	1000PF
740	C8047	T7G	3101054700010	47PF
741	C8048	T7G	3101054700010	47PF
742	C8049	T7G	3101054700010	47PF
743	C8053	B8G	3101081060010	10UF
744	C8054	B8G	3101051040010	0.1UF
745	C8055	B8G	3101051040010	0.1UF
746	C8056	B7H	3101054700010	47PF
747	C8057	B8G	3101081060010	10UF
748	C8058	B8G	3101051030020	0.01UF
749	C8059	B7H	3101054700010	47PF
750	C8060	B7G	3101081060010	10UF
751	C8061	B7H	3101054700010	47PF
752	C8062	B7H	3101054700010	47PF
753	C8063	B7H	3101051040010	0.1UF
754	C8064	B8F	3101081060010	10UF

No.	Ref No.	Print No.	Part No.	Description
755	C8065	B7F	3101051030020	0.01UF
756	C8066	B8F	3101051040010	0.1UF
757	C8068	B7H	3101051040010	0.1UF
758	C8070	B7G	3101051040010	0.1UF
759	C8071	B7G	3101081060010	10UF
760	C8080	B7G	3101061050020	1UF
761	C8081	B7H	3101081060010	10UF
762	C8082	B7H	3101051040010	0.1UF
763	C8085	B7G	3101061050020	1UF
764	C8086	B7H	3101061050020	1UF
765	C8087	B7H	3101051040010	0.1UF
766	C8088	B7F	3101061050020	1UF
767	C8089	B7F	3101054710010	470PF
768	C8090	B7F	3101061050020	1UF
769	C8091	B7G	3101061050020	1UF
770	C8092	B7H	3101061050020	1UF
771	C8094	B7G	3101082260020	22UF
772	C8095	B7H	3101052210010	220PF
773	C8097	B7F	3101082260020	22UF
774	C8099	B7G	3101051020010	1000PF
775	C8100	B7H	3101051030020	0.01UF
776	C8101	B7H	3101051030020	0.01UF
777	C8105	B7G	3101061050020	1UF
778	C8106	B7F	3101081060010	10UF
779	C8107	B7F	3101051040010	0.1UF
780	C8110	B8H	3101081060010	10UF
781	C8113	B8H	3101051040010	0.1UF
782	C8114	B7F	3101054710010	470PF
783	C8115	B8G	3101051010030	100PF
784	C8116	B8G	3101051010030	100PF
785	C8119	B7G	3101051020010	1000PF
786	C8120	B8G	3101051040010	0.1UF
787	C8121	B7G	3101054710010	470PF
788	C8124	B7G	3101051020010	1000PF
789	C8125	B5D	3101051040010	0.1UF
790	C8126	T5E	3101051040010	0.1UF
791	C8127	B4E	3101051040010	0.1UF
792	C8128	B5D	3101051040010	0.1UF
793	C8129	B5D	3101051040010	0.1UF
794	C8130	B5E	3101051040010	0.1UF
795	C8131	B5D	3101051040010	0.1UF
796	C8137	T5E	3101051040010	0.1UF

No.	Ref No.	Print No.	Part No.	Description
797	C8138	B4E	3101051040010	0.1UF
798	C8139	T5E	3101051010030	100PF
799	C8140	B4D	3101051040010	0.1UF
800	C8141	T5D	3101051040010	0.1UF
801	C8142	B4D	3101051040010	0.1UF
802	C8143	B7H	3101054740020	0.47UF
803	C8144	B7H	3101051030020	0.01UF
804	C8145	T6B	3101301020010	1000pF
805	C8146	B5D	3101081060010	10UF
806	C8147	T5E	3101081060010	10UF
807	C8148	B5D	3101053000010	30PF
808	C8149	B5D	3101053000010	30PF
809	C8150	B4D	3101051040010	0.1UF
810	C8151	T5D	3101051010030	100PF
811	C8152	B4D	3101051040010	0.1UF
812	C8153	B5E	3101051040010	0.1UF
813	C8154	B5E	3101051040010	0.1UF
814	C8155	B4E	3101051040010	0.1UF
815	C8156	B5E	3101051040010	0.1UF
816	C8157	B5E	3101051040010	0.1UF
817	C8158	T5D	3101051040010	0.1UF
818	C8159	B5D	3101081060010	10UF
819	C8160	T5D	3101081060010	10UF
820	C8161	B5D	3101081060010	10UF
821	C8162	T5D	3101081060010	10UF
822	C8163	B4D	3101081060010	10UF
823	C8165	T5C	3101061500010	15PF
824	C8166	B5C	3101062230020	0.022UF
825	C8167	T5C	3101061500010	15PF
826	C8168	T6C	3101061500010	15PF
827	C8169	T6C	3101061500010	15PF
828	D1000	T4H	3303240000000	Switching Diode BAS16XV2T1G
829	D1001	T9B	3303240000000	Switching Diode BAS16XV2T1G
830	D1002	T4H	3301990000030	Schottky Barrier Diode RB520S-30
831	D1003	T4H	3301990000030	Schottky Barrier Diode RB520S-30
832	D1004	T4H	3301990000030	Schottky Barrier Diode RB520S-30
833	D1005	T9A	3301990000030	Schottky Barrier Diode RB520S-30
834	D1006	T9B	3301990000030	Schottky Barrier Diode RB520S-30
835	D1007	T9B	3301990000030	Schottky Barrier Diode RB520S-30
836	D2000	B4G	3303240000000	Switching Diode BAS16XV2T1G
837	D2001	B4H	3304010100220	Varactor 1SV305
838	D2002	B4H	3304010100220	Varactor 1SV305

No.	Ref No.	Print No.	Part No.	Description
839	D2003	B4H	3304010100220	Varactor 1SV305
840	D2004	B4H	3304010100220	Varactor 1SV305
841	D2005	B4H	3304010100890	Varactor 1SV279
842	D2006	B4G	3304990000040	Varactor BB145B
843	D2007	B4G	3304990000040	Varactor BB145B
844	D2008	B4G	3304990000040	Varactor BB145B
845	D2009	B4G	3304990000040	Varactor BB145B
846	D2010	B8B	3303240000000	Switching Diode BAS16XV2T1G
847	D2011	B9C	3304010100220	Varactor 1SV305
848	D2012	B9B	3304010100220	Varactor 1SV305
849	D2013	B9B	3304010100220	Varactor 1SV305
850	D2014	B9B	3304010100220	Varactor 1SV305
851	D2015	B9C	3304010100220	Varactor 1SV305
852	D2016	B9C	3304010100220	Varactor 1SV305
853	D2017	B9C	3304010100220	Varactor 1SV305
854	D2018	B9C	3304010100220	Varactor 1SV305
855	D3001	T1G	3303030300000	Schottky Barrier Diode RB706F-40(T106)
856	D3002	T2G	3303030300000	Schottky Barrier Diode RB706F-40(T106)
857	D3003	T3G	3302030500030	Zener diode UDZSTE(175.1B)
858	D3004	T2H	3303030100010	Switching Diode DAN222(TL)
859	D4006	T9H	3399990000260	Rectifier Diode HSM88ASTL-E
860	D4007	B9F	3699019000000	MIX IC SMS3940-029LF Quad-Mixer-Diodes
861	D4011	T9H	3304010100890	Varactor 1SV279
862	D4012	T9H	3304010100890	Varactor 1SV279
863	D4014	T9H	3304010100890	Varactor 1SV279
864	D4015	T9H	3304010100890	Varactor 1SV279
865	D4018	T9F	3304010100890	Varactor 1SV279
866	D4019	T9F	3304010100890	Varactor 1SV279
867	D4022	T9F	3304010100890	Varactor 1SV279
868	D4023	T9F	3304010100890	Varactor 1SV279
869	D5001	B8D	3304010100220	Varactor 1SV305
870	D5002	B8D	3304010100180	Varactor 1SV325
871	D6002	T7B	3301100300030	Rectifier Diode B340A-F
872	D6003	T7C	3310990000090	ESDProtection Diode MMBZ6V8ALT1G
873	D6004	B6B	3310240200000	ESDProtection Diode MMBZ5V6ALT1G
874	D6005	B6B	3310240200000	ESDProtection Diode MMBZ5V6ALT1G
875	D6006	T5B	3301100300030	Rectifier Diode B340A-F
876	D6007	B6B	3311240100000	Schottky Diode MBRM120LT1G
877	D6008	B7C	3310240200000	ESDProtection Diode MMBZ5V6ALT1G
878	D6009	B6F	3311240100000	Schottky Diode MBRM120LT1G
879	D6010	B4B	3303100500000	Switching Diode BAV70
880	D6014	T5A	3399100000010	TVS diode 3.0SMCJ20A

No.	Ref No.	Print No.	Part No.	Description
881	D6019	T7C	3311390000000	Schottky Diode PMEG6010CEJ
882	D6021	B5A	3303100500000	Switching Diode BAV70
883	D6022	B4B	3301100300030	Rectifier Diode B340A-F
884	D6025	B4B	3301100300030	Rectifier Diode B340A-F
885	D6026	B5B	3311390000000	Schottky Diode PMEG6010CEJ
886	D7005	B8B	3310240000000	ESDProtection Diode MMBZ20VALT1G
887	D7007	B8C	3310240000000	ESDProtection Diode MMBZ20VALT1G
888	D7008	B8B	3310240000000	ESDProtection Diode MMBZ20VALT1G
889	D7009	B7C	3310240000000	ESDProtection Diode MMBZ20VALT1G
890	D7010	B7B	3310240000000	ESDProtection Diode MMBZ20VALT1G
891	D7012	B8B	3310240000000	ESDProtection Diode MMBZ20VALT1G
892	D7013	B8B	3699037000010	USB Protected IC PRTR5V0U2X ESD&EMI
893	D7014	B8B	3310990000090	ESDProtection Diode MMBZ6V8ALT1G
894	D7015	T6D	3307110100080	【MSD3】LED KPT-1608SGC
895	D7016	T7E	3307110100080	【MSD3】LED KPT-1608SGC
896	D7017	T5B	3307110100080	【MSD3】LED KPT-1608SGC
897	D7019	B7B	3310240000000	ESDProtection Diode MMBZ20VALT1G
898	D7020	B7B	3310240000000	ESDProtection Diode MMBZ20VALT1G
899	D7103	B6H	3310240200000	ESDProtection Diode MMBZ5V6ALT1G
900	D7104	B6F	3302100000010	Zener diode MMSZ5226B
901	D7105	B6F	3302100000010	Zener diode MMSZ5226B
902	D8001	B7F	3310240000000	ESDProtection Diode MMBZ20VALT1G
903	D8003	B7G	3310240000000	ESDProtection Diode MMBZ20VALT1G
904	D8004	B7G	3302031100010	Zener diode EDZTE613.6B
905	D8006	B5D	3307110100080	【MSD3】LED KPT-1608SGC
906	D8007	B5D	3307110100080	【MSD3】LED KPT-1608SGC
907	D8011	B5E	3307110100080	【MSD3】LED KPT-1608SGC
908	D8014	T3H	3303030800020	Switching Diode 1SS390
909	F6001	T7A	4002000000340	Fuse 1812L150/24
910	L1000	T4H	3221506601000	600Ω
911	L1001	T4I	3221506601000	600Ω
912	L1002	T4I	3221506601000	600Ω
913	L1003	B5H	3212106120000	12nH
914	L1004	B5H	3210306220000	22nH
915	L1005	B5H	3212106120000	12nH
916	L1006	B5H	3210306229000	2.2nH
917	L1007	B5H	3210306229000	2.2nH
918	L1011	T5G	3221506601000	600Ω
919	L1012	T5H	3213306561000	0.56uH
920	L1015	T9B	3221506601000	600Ω
921	L1016	T9B	3221506601000	600Ω
922	L1017	T9B	3221506601000	600Ω

No.	Ref No.	Print No.	Part No.	Description
923	L1018	B8C	3210306390000	39nH
924	L1019	B8C	3210306820000	82nH
925	L1020	B8B	3210306390000	39nH
926	L1022	B8C	3212106829000	8.2nH
927	L1023	B8B	3212106829000	8.2nH
928	L1025	T9C	3221506601000	600Ω
929	L1027	T8B	3213306561000	0.56uH
930	L2000	B5G	3221506601000	600Ω
931	L2001	B4H	3217607471000	470nH
932	L2002	B5G	3221506601000	600Ω
933	L2003	B4H	3217607471000	470nH
934	L2004	B4G	3221506601000	600Ω
935	L2005	B4H	3217607471000	470nH
936	L2007	B4H	3217607330000	33nH
937	L2008	B4H	3217112100000	10nH
938	L2009	B4H	3217607471000	470nH
939	L2010	T4G	3221506601000	600Ω
940	L2012	T4G	3217106470000	47nH
941	L2013	B4H	3221506601000	600Ω
942	L2014	T4G	3217106120010	12nH
943	L2015	T4G	3217106390010	39nH
944	L2016	T4G	3217106120010	12nH
945	L2017	T5G	3221506601000	600Ω
946	L2018	T5G	3217106390010	39nH
947	L2022	T5G	3001050000000	0Ω
948	L2023	B4G	3217607471000	470nH
949	L2024	B4G	3217607471000	470nH
950	L2025	B4G	3217607471000	470nH
951	L2026	B4G	3214307270010	27nH
952	L2027	B4G	3217112100000	10nH
953	L2028	B4H	3217607471000	470nH
954	L2029	B9B	3221506601000	600Ω
955	L2030	B9B	3217607471000	470nH
956	L2031	B8C	3221506601000	600Ω
957	L2032	B9B	3217607471000	470nH
958	L2033	B9C	3217607471000	470nH
959	L2034	B9B	3217112120000	12NH
960	L2035	B9B	3214307390000	39nH
961	L2036	T9C	3221506601000	600Ω
962	L2037	B9C	3217607471000	470nH
963	L2038	T9C	3217106101010	100nH
964	L2039	T9C	3217106101010	100nH

No.	Ref No.	Print No.	Part No.	Description
965	L2040	B9C	3217607471000	470nH
966	L2041	T8C	3217106150000	15nH
967	L2042	T8C	3217106150000	15nH
968	L2044	T9C	3221506601000	600Ω
969	L2046	B9C	3217607471000	470nH
970	L2047	T9C	3001050000000	0Ω
971	L2048	B9C	3217607471000	470nH
972	L2049	B9C	3217112120000	12NH
973	L2050	B9C	3217607330000	33nH
974	L2051	B9C	3217607471000	470nH
975	L2052	B8B	3221506601000	600Ω
976	L2059	T9C	3001050000000	0Ω
977	L2060	T9C	3217106101010	100nH
978	L2061	T4G	3001050000000	0Ω
979	L3001	T2B	3221513600000	60Ω
980	L3002	T2C	3221513600000	60Ω
981	L3003	T2C	3221513600000	60Ω
982	L3004	T2B	3221513600000	60Ω
983	L3005	T2C	3233099400010	40nH
984	L3007	T2E	3233099160000	16nH
985	L3008	T2F	3233099160000	16nH
986	L3009	T1F	3233099160000	16nH
987	L3010	T2H	3210306270000	27nH
988	L3011	T2H	3217112102020	1uH
989	L3012	T1G	3210306390000	39nH
990	L3013	T3C	3210306279000	2.7nH
991	L3014	T4E	3221513600000	60Ω
992	L3015	T3G	3221506601000	600Ω
993	L3016	T4F	3221506601000	600Ω
994	L3017	T4D	3233099470000	47nH 1
995	L3018	T4F	3212106221000	220nH
996	L3019	T3E	3210306229000	2.2nH
997	L3021	T4F	3210306220000	22nH
998	L3022	T3E	3221506601000	600Ω
999	L3023	T4E	3210306229000	2.2nH
1000	L3024	T2H	3213306102000	1uH
1001	L3025	T3C	3101065600040	56PF
1002	L3031	T2D	3237199080000	8nH
1003	L4001	T9F	3211506101000	Bead inductor BLM18PG600SN1D 60ohm
1004	L4002	T9G	3211506101000	Bead inductor BLM18PG600SN1D 60ohm
1005	L4003	T9G	3210306221000	220nH
1006	L4004	T9G	3212106120000	12nH

No.	Ref No.	Print No.	Part No.	Description
1007	L4007	T9I	3217107180010	18nH
1008	L4008	T9I	3217107180010	18nH
1009	L4009	T8I	3217107180010	18nH
1010	L4010	B9I	3217112102020	1uH
1011	L4012	T8H	3217107100000	10nH
1012	L4013	T8G	3210306150000	15nH
1013	L4014	T8H	3217107100000	10nH
1014	L4017	T9F	3217106150000	15nH
1015	L4018	T9F	3217106150000	15nH
1016	L4019	B9D	3211506101000	Bead inductor BLM18PG600SN1D 60ohm
1017	L4020	T9F	3217107100000	10nH
1018	L4021	B9E	3210306270000	27nH
1019	L4022	B9E	3217106220000	22nH
1020	L4023	B9E	3217106220000	22nH
1021	L4024	B9E	3217106180010	18nH
1022	L4026	B9F	3210306470000	47nH
1023	L4027	T9E	3211506101000	Bead inductor BLM18PG600SN1D 60ohm
1024	L4028	T9D	3101061040020	0.1UF
1025	L4029	B9F	3210406471000	470nH
1026	L4030	T9D	3213306821000	0.82uH
1027	L4031	T9E	3210406271000	270nH
1028	L4032	T9E	3210306221000	220nH
1029	L4033	T8F	3217107100000	10nH
1030	L5001	T8E	3210406331000	330nH
1031	L5002	T8D	3221506601000	600Ω
1032	L5003	T8D	3221506601000	600Ω
1033	L5004	T8E	3221506601000	600Ω
1034	L5005	B8D	3213306682000	6.8uH
1035	L5006	T8E	3213212103000	10uH
1036	L5007	T8E	3213212103000	10uH
1037	L5008	T8E	3221506601000	600Ω
1038	L5009	B8D	3217607221000	220nH
1039	L5010	T8D	3221506601000	600Ω
1040	L5011	T8E	3221506601000	600Ω
1041	L5012	T8D	3221506601000	600Ω
1042	L5013	B8E	3210406471000	470nH
1043	L5014	T8E	3221506601000	600Ω
1044	L5015	T8D	3213306561000	0.56uH
1045	L5016	B8E	3213212332000	3.3uH
1046	L6001	T6C	3217699153000	15UH
1047	L6002	T6B	3241799103000	10uH
1048	L6003	T6B	3221513600000	60Ω

No.	Ref No.	Print No.	Part No.	Description
1049	L6004	T5B	3221513600000	60Ω
1050	L6005	B7B	3221506181000	180Ω
1051	L6006	B7B	3241799103000	10uH
1052	L6007	B6C	3241799103000	10uH
1053	L6008	B6C	3221506181000	180Ω
1054	L6009	B7C	3211799622010	6.2uH
1055	L6010	T7A	3221513600000	60Ω
1056	L6011	B7C	3221506181000	180Ω
1057	L6013	T4B	3241799103000	10uH
1058	L6014	T5C	3241799103000	10uH
1059	L6015	B6B	3221513600000	60Ω
1060	L6016	T8C	3221506181000	180Ω
1061	L6017	B5A	3221513600000	60Ω
1062	L6028	T8H	3221506181000	180Ω
1063	L6030	B6B	3221506181000	180Ω
1064	L6031	T5I	3221506181000	180Ω
1065	L6033	T8C	3221506181000	180Ω
1066	L6034	T5F	3221506181000	180Ω
1067	L7002	T7E	3210406471000	470nH
1068	L7003	T7E	3210406471000	470nH
1069	L8005	B8G	3221506181000	180Ω
1070	L8007	B7H	3221506300000	30Ω
1071	L8009	B8G	3221506601070	600Ω
1072	L8013	T6E	3221513600000	60Ω
1073	Q2001	B5G	3499000000150	Transistor UMC4(NTR) PNP+NPN
1074	Q2002	B4G	3403003000060	NPN Transistor 2SC4617TLS
1075	Q2003	B4H	3408002000080	NPN Transistor 2SC5010
1076	Q2004	B4G	3499000000150	Transistor UMC4(NTR) PNP+NPN
1077	Q2005	T4G	3404006000000	NPN Transistor PBR941
1078	Q2006	T5G	3609003999000	MMIC amplifier UPC8179TK
1079	Q2007	B4G	3408002000080	NPN Transistor 2SC5010
1080	Q2009	B8B	3403003000060	NPN Transistor 2SC4617TLS
1081	Q2010	B9B	3499000000150	Transistor UMC4(NTR) PNP+NPN
1082	Q2011	B9B	3408002000080	NPN Transistor 2SC5010
1083	Q2012	T9C	3404006000000	NPN Transistor PBR941
1084	Q2013	T9C	3609003999000	MMIC amplifier UPC8179TK
1085	Q2014	B9C	3408002000080	NPN Transistor 2SC5010
1086	Q2015	B9B	3499000000150	Transistor UMC4(NTR) PNP+NPN
1087	Q3001	T3D	3601017000000	PD85035STR1-E
1088	Q3002	T3D	3504990000050	PA MOSFET RD02MUS1B-T112
1089	Q3003	T4F	3404999000000	NPN Transistor BFG540W
1090	Q4001	T9G	3403014000020	Transistor UMT1NTR PNP*2

No.	Ref No.	Print No.	Part No.	Description
1091	Q4002	T8G	3404999000000	NPN Transistor BFG540W
1092	Q4003	B9E	3404999000000	NPN Transistor BFG540W
1093	Q4004	T9D	3404006000000	NPN Transistor PBR941
1094	Q4005	T9D	3404006000000	NPN Transistor PBR941
1095	Q5001	B8E	3403003000060	NPN Transistor 2SC4617TLS
1096	Q5002	B8E	3408002000000	NPN Transistor 2SC3356-T1B-A-R24
1097	Q6000	B5C	3413999000000	NPN Transistor FZT651
1098	Q6001	T5E	3599990000710	P-MOSFET
1099	Q6002	T7B	3403002000010	PNP Transistor 2SB1184
1100	Q6003	T7B	3403008000010	Transistor DTC114EE(TL)
1101	Q6004	T4F	3403008000010	Transistor DTC114EE(TL)
1102	Q6005	B4C	3403008000010	Transistor DTC114EE(TL)
1103	Q6007	T7B	3403002000000	PNP Transistor 2SB1132FD5T100R
1104	Q6009	T7B	3403008000010	Transistor DTC114EE(TL)
1105	Q6016	T7C	3403002000000	PNP Transistor 2SB1132FD5T100R
1106	Q6017	T7C	3403008000010	Transistor DTC114EE(TL)
1107	Q6021	T5I	3403008000010	Transistor DTC114EE(TL)
1108	Q7001	B8B	3414999000000	Transistor MUN5214DW1T1G
1109	Q7002	B7C	3414999000000	Transistor MUN5214DW1T1G
1110	Q7003	B8B	3414999000000	Transistor MUN5214DW1T1G
1111	Q7004	B8C	3414999000000	Transistor MUN5214DW1T1G
1112	Q7005	B8B	3414999000000	Transistor MUN5214DW1T1G
1113	Q7006	B7B	3414999000000	Transistor MUN5214DW1T1G
1114	Q7007	B7C	3414999000000	Transistor MUN5214DW1T1G
1115	Q7008	B8C	3414999000000	Transistor MUN5214DW1T1G
1116	Q7009	B8B	3414999000000	Transistor MUN5214DW1T1G
1117	Q7101	B7I	3403008000010	Transistor DTC114EE(TL)
1118	Q7102	B7I	3403008000010	Transistor DTC114EE(TL)
1119	Q7103	B7I	3403008000010	Transistor DTC114EE(TL)
1120	Q7104	B8I	3403008000010	Transistor DTC114EE(TL)
1121	Q7105	B7I	3403008000010	Transistor DTC114EE(TL)
1122	Q7106	B8I	3403008000010	Transistor DTC114EE(TL)
1123	Q7108	B8I	3403008000010	Transistor DTC114EE(TL)
1124	Q8004	B7G	3499000000150	Transistor UMC4(NTR) PNP+NPN
1125	Q8006	B7G	3499000000150	Transistor UMC4(NTR) PNP+NPN
1126	Q8007	B8H	3499000000150	Transistor UMC4(NTR) PNP+NPN
1127	Q8008	B7G	3499000000150	Transistor UMC4(NTR) PNP+NPN
1128	Q8009	B7G	3499000000150	Transistor UMC4(NTR) PNP+NPN
1129	Q8010	B7G	3403008000010	Transistor DTC114EE(TL)
1130	R1000	T4H	3001051000000	10Ω
1131	R1001	B5H	3001054720000	4.7KΩ
1132	R1002	T4I	3001051020010	1KΩ

No.	Ref No.	Print No.	Part No.	Description
1133	R1003	T5H	3001051010000	100Ω
1134	R1004	T4H	3001051010000	100Ω
1135	R1005	T5H	3001051000000	10Ω
1136	R1006	T4I	3001051030000	10KΩ
1137	R1007	T4I	3001051020010	1KΩ
1138	R1008	T4H	3001051020010	1KΩ
1139	R1009	T4H	3001055100010	51Ω
1140	R1010	T5H	3001055100010	51Ω
1141	R1011	T5H	3001055100010	51Ω
1142	R1013	T4H	3001061210000	120Ω
1143	R1014	T4H	3001062200000	22Ω
1144	R1016	T4H	3001061010000	100Ω
1145	R1017	T4I	3001051210000	120Ω
1146	R1020	T4I	3001051020010	1KΩ
1147	R1022	T4H	3001065600000	56Ω
1148	R1025	T4H	3001051000000	10Ω
1149	R1027	T4H	3001050000000	0Ω
1150	R1028	T5F	3001051020010	1KΩ
1151	R1029	T5F	3001051030000	10KΩ
1152	R1030	T5F	3001051040010	100KΩ
1153	R1031	T5G	3001051030000	10KΩ
1154	R1036	T5G	3001051020010	1KΩ
1155	R1038	T4H	3001050000000	0Ω
1156	R1039	T9B	3001050000000	0Ω
1157	R1040	T4H	3001051520000	1.5KΩ
1158	R1043	T4H	3001054710000	470Ω
1159	R1046	T4I	3001051020010	1KΩ
1160	R1047	T9B	3001051000000	10Ω
1161	R1048	B8B	3001054720000	4.7KΩ
1162	R1049	T9A	3001051020010	1KΩ
1163	R1050	T8B	3001051010000	100Ω
1164	R1051	T9B	3001051010000	100Ω
1165	R1052	T9A	3001051030000	10KΩ
1166	R1053	T8B	3001051000000	10Ω
1167	R1054	T9A	3001051020010	1KΩ
1168	R1055	T9B	3001051020010	1KΩ
1169	R1056	T8B	3001055100010	51Ω
1170	R1057	T8B	3001055100010	51Ω
1171	R1058	T8B	3001055100010	51Ω
1172	R1059	T9B	3001061510000	150Ω
1173	R1060	T9B	3001060000000	0Ω
1174	R1061	T9B	3001068200000	82Ω

No.	Ref No.	Print No.	Part No.	Description
1175	R1062	T9B	3001051210000	120Ω
1176	R1064	T9B	3001050000000	0Ω
1177	R1066	T9B	3001063300000	33Ω
1178	R1068	T9B	3001051020010	1KΩ
1179	R1069	T9B	3001051000000	10Ω
1180	R1072	B4H	3001051030000	10KΩ
1181	R1074	T9B	3001051020010	1KΩ
1182	R1076	T9B	3001051520000	1.5KΩ
1183	R1077	T9B	3001054710000	470Ω
1184	R1080	T9C	3001051020010	1KΩ
1185	R1081	B9C	3001051030000	10KΩ
1186	R2000	B4H	3001063320000	3.3KΩ
1187	R2001	B4I	3001068220000	8.2KΩ
1188	R2002	B5H	3001051010000	100Ω
1189	R2003	B4G	3001054720000	4.7KΩ
1190	R2005	B5G	3001051040010	100KΩ
1191	R2006	B5G	3001051020010	1KΩ
1192	R2007	B4G	3001051040010	100KΩ
1193	R2008	T4G	3001061510000	150Ω
1194	R2009	T5G	3001061000000	10Ω
1195	R2010	B4H	3210306180000	18nH
1196	R2011	B4G	3001051020010	1KΩ
1197	R2012	B4H	3001061210000	120Ω
1198	R2013	T4G	3001053320000	3.3KΩ
1199	R2015	B4H	3001055630000	56KΩ
1200	R2016	B4H	3001051040010	100KΩ
1201	R2017	T4G	3001050000000	0Ω
1202	R2018	T4G	3001051530000	15KΩ
1203	R2020	T4G	3001050000000	0Ω
1204	R2021	B4H	3001053930000	39KΩ
1205	R2022	T8C	3001050000000	0Ω
1206	R2023	B5G	3001051020010	1KΩ
1207	R2025	T4G	3001050000000	0Ω
1208	R2026	B4G	3001051020010	1KΩ
1209	R2028	T5G	3001051000000	10Ω
1210	R2031	B4H	3001051240000	120KΩ
1211	R2032	B4H	3001051540020	150KΩ
1212	R2033	B5G	3001063320000	3.3KΩ
1213	R2034	T4G	3001058220000	8.2KΩ
1214	R2037	T4G	3001052200000	22Ω
1215	R2038	T5G	3001054710000	470Ω
1216	R2039	T5G	3001054710000	470Ω

No.	Ref No.	Print No.	Part No.	Description
1217	R2041	B4H	3210306180000	18nH
1218	R2042	B5G	3001068220000	8.2KΩ
1219	R2044	B5G	3001051010000	100Ω
1220	R2045	B4H	3001061210000	120Ω
1221	R2046	B9B	3001063320000	3.3KΩ
1222	R2047	B8B	3001054720000	4.7KΩ
1223	R2048	B9B	3001068220000	8.2KΩ
1224	R2049	B9B	3001051010000	100Ω
1225	R2050	B9B	3001051040010	100KΩ
1226	R2051	B8C	3001051040010	100KΩ
1227	R2052	B8B	3001051020010	1KΩ
1228	R2053	T9C	3001061510000	150Ω
1229	R2055	B9C	3001061210000	120Ω
1230	R2056	T9C	3001053320000	3.3KΩ
1231	R2057	T9C	3001061000000	10Ω
1232	R2058	T9C	3001051530000	15KΩ
1233	R2059	B8C	3001063320000	3.3KΩ
1234	R2060	T9C	3001050000000	0Ω
1235	R2061	T9C	3001050000000	0Ω
1236	R2062	B8C	3001051010000	100Ω
1237	R2063	B9C	3001068220000	8.2KΩ
1238	R2065	T9C	3001051000000	10Ω
1239	R2066	T9C	3001058220000	8.2KΩ
1240	R2067	T9D	3001051000000	10Ω
1241	R2068	T9C	3001054710000	470Ω
1242	R2069	T9C	3001054710000	470Ω
1243	R2072	B9C	3001061210000	120Ω
1244	R2073	B9A	3001051020010	1KΩ
1245	R2076	B8B	3001051020010	1KΩ
1246	R2078	B9B	3001051020010	1KΩ
1247	R3001	T2C	3001081000000	10Ω
1248	R3002	T2H	3001082730000	27KΩ
1249	R3003	T3C	3001082290000	2.2Ω
1250	R3004	T2H	3001071010000	100Ω
1251	R3005	T3C	3001082290000	2.2Ω
1252	R3006	T1G	3001071010000	100Ω
1253	R3007	T3D	3001082290000	2.2Ω
1254	R3008	T2H	3001071810000	180Ω
1255	R3009	T3D	3001082290000	2.2Ω
1256	R3010	T2H	3001061510000	150Ω
1257	R3011	T1G	3001066800000	68Ω
1258	R3012	T1G	3001071810000	180Ω

No.	Ref No.	Print No.	Part No.	Description
1259	R3013	T3C	3001081020000	1KΩ
1260	R3014	T3C	3001062220000	2.2KΩ
1261	R3015	T1H	3001061010000	100Ω
1262	R3017	T1H	3101061300000	13PF
1263	R3018	T3C	3001068220030	8.2KΩ
1264	R3019	T2G	3210306220000	22nH
1265	R3021	T3G	3001054730000	47KΩ
1266	R3022	T2G	3101061100010	11PF
1267	R3023	T3G	3001056830000	68KΩ
1268	R3029	T3G	3001053320000	3.3KΩ
1269	R3030	T3G	3001051030000	10KΩ
1270	R3031	T3G	3001050000000	0Ω
1271	R3032	T2G	3001053030010	30KΩ
1272	R3033	T2G	3001052220010	2.2KΩ
1273	R3034	T2G	3001051220000	1.2KΩ
1274	R3035	T3G	3001053320000	3.3KΩ
1275	R3036	T3G	3001051530000	15KΩ
1276	R3037	T3G	3001051540000	150KΩ
1277	R3039	T3G	3001050000000	0Ω
1278	R3040	T4F	3001071010000	100Ω
1279	R3041	T1G	3001050000000	0Ω
1280	R3042	T3G	3001051520000	1.5KΩ
1281	R3043	T2G	3001051540000	150KΩ
1282	R3044	T2G	3001050000000	0Ω
1283	R3045	T4F	3001063320000	3.3KΩ
1284	R3046	T1G	3001058230000	82KΩ
1285	R3047	T2G	3001051520000	1.5KΩ
1286	R3048	T3D	3001063310010	330Ω
1287	R3049	T2G	3001055130010	51KΩ
1288	R3050	T2G	3001055110000	510Ω
1289	R3051	T3E	3001060000000	0Ω
1290	R3052	T4E	3210306569000	5.6nH
1291	R3055	T2G	3001056830000	68KΩ
1292	R3056	T4F	3001050000000	0Ω
1293	R3057	T4F	3001056800010	68Ω
1294	R3058	T2H	3001051020010	1KΩ
1295	R3059	T3D	3001071010000	100Ω
1296	R3060	T3H	3001050000000	0Ω
1297	R3061	T4E	3101060700020	7PF
1298	R3062	T4F	3001051010000	100Ω
1299	R3063	T2H	3001053330010	33KΩ
1300	R3065	T4F	3001051010000	100Ω

No.	Ref No.	Print No.	Part No.	Description
1301	R3067	T3E	3001062220000	2.2KΩ
1302	R3068	T3E	3001061230000	12KΩ
1303	R3069	T4F	3001061000000	10Ω
1304	R3071	T3H	3001051520010	1.5KΩ
1305	R3072	T3H	3001053320010	3.3KΩ
1306	R3073	T4F	3001064720000	4.7KΩ
1307	R3074	T2G	3001054740010	470KΩ
1308	R3076	T2H	3001051340000	130KΩ
1309	R3077	T2H	3001051040000	100KΩ
1310	R3079	T3G	3001054740010	470KΩ
1311	R3080	T2G	3001051040000	100KΩ
1312	R3081	T3G	3001054740010	470KΩ
1313	R3082	T3G	3001054740010	470KΩ
1314	R3083	T3G	3001055630010	56KΩ
1315	R3084	T3H	3001054740010	470KΩ
1316	R3085	T3H	3001050000000	0Ω
1317	R3090	T4F	3001061530010	15KΩ
1318	R4001	T9G	3001060000000	0Ω
1319	R4002	T9G	3001056810000	680Ω
1320	R4003	T9G	3001051040010	100KΩ
1321	R4004	T9G	3001071000000	10Ω
1322	R4005	T9G	3001051040010	100KΩ
1323	R4006	B9I	3001082730000	27KΩ
1324	R4007	T9G	3001051030000	10KΩ
1325	R4008	T9F	3001051040010	100KΩ
1326	R4009	T9H	3001051040010	100KΩ
1327	R4010	T9H	3001051040010	100KΩ
1328	R4011	T9G	3001052730000	27KΩ
1329	R4012	T9G	3001051040010	100KΩ
1330	R4013	T9G	3001052720010	2.7KΩ
1331	R4014	T9G	3001055620000	5.6KΩ
1332	R4015	T8G	3001051220000	1.2KΩ
1333	R4016	T9H	3001051040010	100KΩ
1334	R4017	T9H	3001051040010	100KΩ
1335	R4018	T9G	3001051040010	100KΩ
1336	R4019	T9F	3001051040010	100KΩ
1337	R4020	T8G	3001051220000	1.2KΩ
1338	R4022	B9E	3001071010000	100Ω
1339	R4023	B9E	3001071010000	100Ω
1340	R4024	B9D	3001053320000	3.3KΩ
1341	R4025	B9E	3001051220000	1.2KΩ
1342	R4026	B9F	3001055100010	51Ω

No.	Ref No.	Print No.	Part No.	Description
1343	R4027	B9D	3001056800010	68Ω
1344	R4028	B9D	3001051220000	1.2KΩ
1345	R4029	B9D	3001051010040	100Ω
1346	R4030	B9D	3001051010040	100Ω
1347	R4031	B9D	3001063310010	330Ω
1348	R4032	T9D	3001055120030	5.1KΩ
1349	R4033	T9E	3001051220000	1.2KΩ
1350	R4034	T9D	3001055100010	51Ω
1351	R4035	T9D	3001053310000	330Ω
1352	R4036	T9E	3001054720000	4.7KΩ
1353	R4037	T9D	3001053030010	30KΩ
1354	R4038	T9E	3001052030000	20KΩ
1355	R4039	T9D	3001053030010	30KΩ
1356	R4040	T9E	3001055630000	56KΩ
1357	R4041	T9F	3001054720000	4.7KΩ
1358	R4042	B9E	3001050000000	0Ω
1359	R4043	B9F	3001050000000	0Ω
1360	R5001	T8E	3001060000000	0Ω
1361	R5002	T8E	3001055100010	51Ω
1362	R5003	T8D	3001058210000	820Ω
1363	R5004	T8D	3001053320000	3.3KΩ
1364	R5005	B8D	3001061030010	10KΩ
1365	R5006	B8E	3001051810010	180Ω
1366	R5007	B8E	3001054720000	4.7KΩ
1367	R5008	T8D	3001051030000	10KΩ
1368	R5009	T8D	3001053300010	33Ω
1369	R5010	T8D	3001053300010	33Ω
1370	R5011	B8D	3001068220000	8.2KΩ
1371	R5012	T8D	3001053300010	33Ω
1372	R5013	B8E	3001052710010	270Ω
1373	R5014	T8E	3001051040010	100KΩ
1374	R5015	T8D	3001053300010	33Ω
1375	R5016	B8E	3001051820000	1.8KΩ
1376	R5017	T8D	3001053300010	33Ω
1377	R5018	T8E	3001053300010	33Ω
1378	R5019	T8D	3001053300010	33Ω
1379	R5020	B8E	3001055620000	5.6KΩ
1380	R5021	B8E	3001055110000	510Ω
1381	R5022	B8D	3001051220000	1.2KΩ
1382	R6001	T5E	3001054730000	47KΩ
1383	R6002	T6B	3001061030010	10KΩ
1384	R6003	T6B	3001051230000	12KΩ

No.	Ref No.	Print No.	Part No.	Description
1385	R6004	T6B	3001063320000	3.3KΩ
1386	R6005	T5B	3001064720050	4.7KΩ
1387	R6006	B7C	3001054730000	47KΩ
1388	R6007	B6B	3001054730000	47KΩ
1389	R6008	B7B	3001054730000	47KΩ
1390	R6009	T5B	3001066810000	680Ω
1391	R6010	B7B	3001054730000	47KΩ
1392	R6011	B7B	3001054730000	47KΩ
1393	R6012	B7B	3001054730000	47KΩ
1394	R6013	T6B	3001051040010	100KΩ
1395	R6014	T5B	3001062230030	22KΩ
1396	R6015	T4B	3001061040010	100KΩ
1397	R6016	T5E	3001061530010	15KΩ
1398	R6017	T5E	3001062220000	2.2KΩ
1399	R6019	B6B	3001051030000	10KΩ
1400	R6020	T7B	3001054730000	47KΩ
1401	R6021	B6B	3001050000000	0Ω
1402	R6022	B7C	3001062040020	200KΩ
1403	R6023	T7B	3001071020000	1KΩ
1404	R6025	T7B	3001051020010	1KΩ
1405	R6026	T4F	3001061820000	1.8KΩ
1406	R6027	B7C	3001061240010	120KΩ
1407	R6028	T7B	3001051030000	10KΩ
1408	R6029	B6F	3001050000000	0Ω
1409	R6030	B6F	3001053300010	33Ω
1410	R6031	T5B	3001074720010	4.7KΩ
1411	R6032	B6F	3001051330000	13KΩ
1412	R6033	B6F	3001051330000	13KΩ
1413	R6034	B5F	3001054740010	470KΩ
1414	R6035	B5F	3001051230010	12KΩ
1415	R6036	B6F	3001051220000	1.2KΩ
1416	R6037	B5F	3001053320010	3.3KΩ
1417	R6038	B5F	3001051230010	12KΩ
1418	R6039	T8B	3001054730000	47KΩ
1419	R6040	B5A	3001070000000	0Ω
1420	R6041	B5F	3001052220010	2.2KΩ
1421	R6042	T7B	3001054730000	47KΩ
1422	R6043	B5C	3001061030010	10KΩ
1423	R6044	B6F	3001051330000	13KΩ
1424	R6045	T7B	3001054720000	4.7KΩ
1425	R6046	B4C	3001061030010	10KΩ
1426	R6047	B5C	3001053300010	33Ω

No.	Ref No.	Print No.	Part No.	Description
1427	R6048	T7C	3001054720000	4.7KΩ
1428	R6049	B6F	3001051330000	13KΩ
1429	R6050	B6F	3001054740010	470KΩ
1430	R6051	B6F	3001051220000	1.2KΩ
1431	R6052	B6F	3001059120000	9.1KΩ
1432	R6053	B6F	3001059120000	9.1KΩ
1433	R6054	T5B	3001064740000	470KΩ
1434	R6055	T5F	3001054730000	47KΩ
1435	R6057	T5B	3001067520030	7.5KΩ
1436	R6063	T8H	3001054730000	47KΩ
1437	R6068	T8C	3001054730000	47KΩ
1438	R6070	B5C	3001054710010	470Ω
1439	R6072	B4C	3001061010000	100Ω
1440	R6073	B5C	3001061030010	10KΩ
1441	R6075	B6B	3001053300010	33Ω
1442	R6076	B6B	3001054720000	4.7KΩ
1443	R6077	B6B	3001054720000	4.7KΩ
1444	R6090	T8H	3001054730000	47KΩ
1445	R6106	B6B	3001053300010	33Ω
1446	R7004	T5G	3001051030000	10KΩ
1447	R7005	T5G	3001051030000	10KΩ
1448	R7006	T5G	3001051030000	10KΩ
1449	R7008	T5G	3001050000000	0Ω
1450	R7010	T6H	3001051030000	10KΩ
1451	R7011	T6H	3001051030000	10KΩ
1452	R7012	T6H	3001051030000	10KΩ
1453	R7013	T6H	3001051030000	10KΩ
1454	R7014	T6H	3001051030000	10KΩ
1455	R7015	T6H	3001051030000	10KΩ
1456	R7016	T6H	3001051030000	10KΩ
1457	R7017	T5G	3001051030000	10KΩ
1458	R7020	B6G	3001060000000	0Ω
1459	R7022	T6F	3001053300010	33Ω
1460	R7023	T6G	3001053300010	33Ω
1461	R7024	T6G	3001051030000	10KΩ
1462	R7027	T6F	3001053300010	33Ω
1463	R7029	T6F	3001053300010	33Ω
1464	R7030	T6G	3001053300010	33Ω
1465	R7031	T6H	3001053300010	33Ω
1466	R7034	T6G	3001053300010	33Ω
1467	R7036	T6G	3001053300010	33Ω
1468	R7037	T6H	3001053300010	33Ω

No.	Ref No.	Print No.	Part No.	Description
1469	R7038	T6F	3001053300010	33Ω
1470	R7039	T6F	3001053300010	33Ω
1471	R7066	B6G	3001051030000	10KΩ
1472	R7071	B6G	3001053300010	33Ω
1473	R7073	B6G	3001053300010	33Ω
1474	R7075	T6F	3001053300010	33Ω
1475	R7077	B6G	3001053300010	33Ω
1476	R7078	T4I	3001053300010	33Ω
1477	R7082	T6F	3001053300010	33Ω
1478	R7083	T6F	3001053300010	33Ω
1479	R7084	T6G	3001053300010	33Ω
1480	R7086	T6F	3001051520000	1.5KΩ
1481	R7092	T6F	3001051530000	15KΩ
1482	R7093	T6F	3001051530000	15KΩ
1483	R7094	T7E	3001050000000	0Ω
1484	R7095	B7E	3001051000000	10Ω
1485	R7096	T6G	3001051020010	1KΩ
1486	R7097	T6G	3001051030000	10KΩ
1487	R7098	T6G	3001051020010	1KΩ
1488	R7099	T6G	3001051030000	10KΩ
1489	R7100	T6G	3001051030000	10KΩ
1490	R7101	T6F	3001053300010	33Ω
1491	R7102	T6G	3001051020010	1KΩ
1492	R7104	B6G	3001051030000	10KΩ
1493	R7105	B6G	3001051000000	10Ω
1494	R7106	T6F	3001051000000	10Ω
1495	R7107	T6F	3001053300010	33Ω
1496	R7108	B6G	3001051030000	10KΩ
1497	R7109	T6F	3001051030000	10KΩ
1498	R7111	T5I	3001053300010	33Ω
1499	R7112	T5I	3001053300010	33Ω
1500	R7113	T8G	3001053300010	33Ω
1501	R7114	B6G	3001060000000	0Ω
1502	R7115	T6F	3001051030000	10KΩ
1503	R7116	T5I	3001053300010	33Ω
1504	R7117	T6I	3001053300010	33Ω
1505	R7118	T6I	3001053300010	33Ω
1506	R7119	T6I	3001053300010	33Ω
1507	R7120	T6I	3001053300010	33Ω
1508	R7121	T8F	3001053300010	33Ω
1509	R7122	T6I	3001053300010	33Ω
1510	R7123	T7G	3001051030000	10KΩ

No.	Ref No.	Print No.	Part No.	Description
1511	R7124	T6F	3001054720000	4.7KΩ
1512	R7125	T6F	3001054720000	4.7KΩ
1513	R7127	T6F	3001051030000	10KΩ
1514	R7129	B6D	3001051030000	10KΩ
1515	R7130	T6E	3001051030000	10KΩ
1516	R7131	T6E	3001051030000	10KΩ
1517	R7133	T5E	3001050000000	0Ω
1518	R7135	T6E	3001051030000	10KΩ
1519	R7136	T7E	3001051030000	10KΩ
1520	R7137	T6E	3001051030000	10KΩ
1521	R7138	T6E	3001051030000	10KΩ
1522	R7139	T7E	3001051030000	10KΩ
1523	R7140	T6E	3001051030000	10KΩ
1524	R7141	T6E	3001051030000	10KΩ
1525	R7142	T6E	3001051030000	10KΩ
1526	R7145	T5D	3001060000000	0Ω
1527	R7146	T6D	3001053300010	33Ω
1528	R7147	T7D	3001053300010	33Ω
1529	R7148	T6D	3001053300010	33Ω
1530	R7149	T6D	3001053300010	33Ω
1531	R7150	T7D	3001053300010	33Ω
1532	R7151	T6D	3001053300010	33Ω
1533	R7152	T6D	3001053300010	33Ω
1534	R7156	B6D	3001053300010	33Ω
1535	R7157	T6D	3001053300010	33Ω
1536	R7158	T6D	3001053300010	33Ω
1537	R7159	T6D	3001053300010	33Ω
1538	R7161	T8G	3001053300010	33Ω
1539	R7162	T8G	3001053300010	33Ω
1540	R7163	T6D	3001052220010	2.2KΩ
1541	R7164	T8F	3001053300010	33Ω
1542	R7165	T7E	3001052220010	2.2KΩ
1543	R7166	T8F	3001053300010	33Ω
1544	R7168	T7D	3001053300010	33Ω
1545	R7169	T7D	3001053300010	33Ω
1546	R7170	T7E	3001053300010	33Ω
1547	R7171	B6D	3001051030000	10KΩ
1548	R7172	T7E	3001053300010	33Ω
1549	R7173	T6D	3001053300010	33Ω
1550	R7174	T6D	3001053300010	33Ω
1551	R7175	T6D	3001053300010	33Ω
1552	R7176	T6D	3001051520000	1.5KΩ

No.	Ref No.	Print No.	Part No.	Description
1553	R7177	T6D	3001050000000	0Ω
1554	R7178	T8F	3001053300010	33Ω
1555	R7179	T7D	3001051020010	1KΩ
1556	R7180	T7E	3001051030000	10KΩ
1557	R7181	T7D	3001051020010	1KΩ
1558	R7182	T7D	3001051030000	10KΩ
1559	R7183	T7D	3001051030000	10KΩ
1560	R7184	T7D	3001053300010	33Ω
1561	R7185	T7D	3001051020010	1KΩ
1562	R7187	B6D	3001051030000	10KΩ
1563	R7188	T6E	3001051000000	10Ω
1564	R7189	T7D	3001051000000	10Ω
1565	R7190	T6D	3001051030000	10KΩ
1566	R7192	T8F	3001053300010	33Ω
1567	R7193	B6D	3001060000000	0Ω
1568	R7194	T7F	3001054720000	4.7KΩ
1569	R7195	T7F	3001054720000	4.7KΩ
1570	R7196	T6D	3001053300010	33Ω
1571	R7197	T6D	3001053300010	33Ω
1572	R7198	T6D	3001051030000	10KΩ
1573	R7200	T7D	3001053300010	33Ω
1574	R7224	B8C	3001051030000	10KΩ
1575	R7225	B8C	3001051030000	10KΩ
1576	R7226	B8C	3001051030000	10KΩ
1577	R7227	B8C	3001051030000	10KΩ
1578	R7228	B7C	3001051030000	10KΩ
1579	R7229	B7B	3001051030000	10KΩ
1580	R7230	B8C	3001051030000	10KΩ
1581	R7231	B8B	3001051030000	10KΩ
1582	R7232	B8B	3001051030000	10KΩ
1583	R7233	B8C	3001051030000	10KΩ
1584	R7235	B8C	3001051030000	10KΩ
1585	R7236	B8C	3001051030000	10KΩ
1586	R7237	B8C	3001054720000	4.7KΩ
1587	R7238	B8C	3001054720000	4.7KΩ
1588	R7239	B8B	3001054720000	4.7KΩ
1589	R7240	B8B	3001054720000	4.7KΩ
1590	R7241	B7C	3001051030000	10KΩ
1591	R7242	B7C	3001054720000	4.7KΩ
1592	R7243	B8B	3001054720000	4.7KΩ
1593	R7244	B7C	3001051030000	10KΩ
1594	R7245	B7B	3001054720000	4.7KΩ

No.	Ref No.	Print No.	Part No.	Description
1595	R7246	B8C	3001051030000	10KΩ
1596	R7247	B8B	3001054720000	4.7KΩ
1597	R7248	B8C	3001051030000	10KΩ
1598	R7249	B8B	3001054720000	4.7KΩ
1599	R7252	B8C	3001053330010	33KΩ
1600	R7253	B8C	3001053330010	33KΩ
1601	R7254	B8C	3001061010000	100Ω
1602	R7255	B8B	3001053330010	33KΩ
1603	R7256	B8B	3001061010000	100Ω
1604	R7257	B8B	3001053330010	33KΩ
1605	R7258	B8B	3001061010000	100Ω
1606	R7259	B7B	3001053330010	33KΩ
1607	R7260	B7B	3001061010000	100Ω
1608	R7261	B7C	3001053330010	33KΩ
1609	R7262	B8C	3001053330010	33KΩ
1610	R7263	B8B	3001053330010	33KΩ
1611	R7264	B8B	3001051020010	1KΩ
1612	R7265	B8B	3001053330010	33KΩ
1613	R7267	B8B	3001050000000	0Ω
1614	R7276	B8B	3001050000000	0Ω
1615	R7282	B8B	3001053300010	33Ω
1616	R7283	B8B	3001051030000	10KΩ
1617	R7288	B7B	3001053300010	33Ω
1618	R7289	B8B	3001053300010	33Ω
1619	R7310	T7E	3001053300010	33Ω
1620	R7311	T7E	3001053300010	33Ω
1621	R7314	T7F	3001061010000	100Ω
1622	R7315	T7F	3001061010000	100Ω
1623	R7326	T5I	3001051030000	10KΩ
1624	R7401	B7H	3001061030010	10KΩ
1625	R7402	B7I	3001061810000	180Ω
1626	R7403	B7I	3001061810000	180Ω
1627	R7404	B7I	3001061810000	180Ω
1628	R7405	B8I	3001061810000	180Ω
1629	R7406	B7I	3001061810000	180Ω
1630	R7407	B8I	3001061810000	180Ω
1631	R7408	B7I	3001062220000	2.2KΩ
1632	R7409	B8I	3001061810000	180Ω
1633	R7410	T6G	3001051030000	10KΩ
1634	R8002	T5F	3001051010000	100Ω
1635	R8003	T5F	3001051010000	100Ω
1636	R8004	T5F	3001051000000	10Ω

No.	Ref No.	Print No.	Part No.	Description
1637	R8005	T5F	3001050000000	0Ω
1638	R8006	T5F	3001051020010	1KΩ
1639	R8008	T6F	3001061000000	10Ω
1640	R8009	T5F	3001051040010	100KΩ
1641	R8010	T5F	3001051040010	100KΩ
1642	R8012	T5F	3001056830000	68KΩ
1643	R8013	T5F	3001053330010	33KΩ
1644	R8014	T6F	3001060000000	0Ω
1645	R8015	T6F	3001051030000	10KΩ
1646	R8035	T7F	3001051020010	1KΩ
1647	R8036	T7F	3001051020010	1KΩ
1648	R8038	T7F	3001051020010	1KΩ
1649	R8039	T7F	3001051020010	1KΩ
1650	R8041	T7F	3001061000000	10Ω
1651	R8042	T7F	3001051040010	100KΩ
1652	R8043	T6F	3001051140010	110KΩ
1653	R8044	T7F	3001061000000	10Ω
1654	R8045	T7F	3001061000000	10Ω
1655	R8046	T7F	3001060000000	0Ω
1656	R8047	T7F	3001060000000	0Ω
1657	R8050	T7G	3001060000000	0Ω
1658	R8053	T7G	3001051030000	10KΩ
1659	R8063	B7F	3001051010000	100Ω
1660	R8064	B7H	3001050000000	0Ω
1661	R8065	B8F	3001054730000	47KΩ
1662	R8072	B7H	3001053300010	33Ω
1663	R8073	B8F	3001054730000	47KΩ
1664	R8074	B7G	3001051010000	100Ω
1665	R8076	B7H	3001050000000	0Ω
1666	R8077	B8G	3001050000000	0Ω
1667	R8078	B7H	3001054730000	47KΩ
1668	R8079	B7H	3001054730000	47KΩ
1669	R8092	B7G	3001050000000	0Ω
1670	R8093	B7G	3001050000000	0Ω
1671	R8097	B7G	3001051530000	15KΩ
1672	R8101	B7F	3001059130000	91KΩ
1673	R8103	B7G	3001053030010	30KΩ
1674	R8108	B7F	3001051030000	10KΩ
1675	R8109	B7F	3001051010000	100Ω
1676	R8110	B7G	3001051040010	100KΩ
1677	R8111	B7H	3001051030000	10KΩ
1678	R8112	B7H	3001051030000	10KΩ

No.	Ref No.	Print No.	Part No.	Description
1679	R8113	B7G	3001051020010	1KΩ
1680	R8114	B7H	3001051030000	10KΩ
1681	R8119	B8H	3001051010000	100Ω
1682	R8121	B7G	3001051020010	1KΩ
1683	R8124	B7G	3001059130000	91KΩ
1684	R8125	B8G	3001051020010	1KΩ
1685	R8126	B7G	3001051020010	1KΩ
1686	R8127	B7G	3001051030000	10KΩ
1687	R8128	B7G	3001051040010	100KΩ
1688	R8129	B7F	3001051010000	100Ω
1689	R8130	B7G	3001054720000	4.7KΩ
1690	R8131	B7F	3001059130000	91KΩ
1691	R8132	B7G	3001051020010	1KΩ
1692	R8133	B7G	3001051030000	10KΩ
1693	R8134	B7G	3001051040010	100KΩ
1694	R8135	B7G	3001051020010	1KΩ
1695	R8136	B5D	3001051020010	1KΩ
1696	R8137	B5D	3001051020010	1KΩ
1697	R8139	B8H	3001052220010	2.2KΩ
1698	R8147	B5E	3001051020010	1KΩ
1699	R8154	B5D	3001051020010	1KΩ
1700	R8155	B5D	3001051020010	1KΩ
1701	R8168	B5E	3001050000000	0Ω
1702	R8169	B5E	3001050000000	0Ω
1703	R8171	B5E	3001050000000	0Ω
1704	R8175	B5D	3099061242020	12.4KΩ
1705	R8186	B5D	3001051050020	1MΩ
1706	R8187	B5E	3001051030000	10KΩ
1707	R8188	B5E	3001051030000	10KΩ
1708	R8192	B5E	3001053300010	33Ω
1709	R8194	B7F	3001051010000	100Ω
1710	R8195	B7H	3001051020010	1KΩ
1711	R8196	B7H	3001051020010	1KΩ
1712	R8198	T5C	3099074999010	49.9Ω
1713	R8199	B5C	3001071000000	10Ω
1714	R8200	T6C	3099074999010	49.9Ω
1715	R8201	T5B	3001067500090	75Ω
1716	R8202	T6C	3099074999010	49.9Ω
1717	R8203	T5C	3099074999010	49.9Ω
1718	R8204	T5B	3001067500090	75Ω
1719	R8206	T5D	3001051030000	10KΩ
1720	RN7005	B8C	3005051010010	100Ω

No.	Ref No.	Print No.	Part No.	Description
1721	RN8001	B7H	3005051010010	100Ω
1722	RN8002	B7G	3005051010010	100Ω
1723	RN8003	T7G	3005051010010	100Ω
1724	RN8004	T6F	3005051010010	100Ω
1725	RN8005	B5E	3005051010010	100Ω
1726	RN8006	B5E	3005051010010	100Ω
1727	RN8007	B4E	3005051010010	100Ω
1728	RN8008	B4E	3005051010010	100Ω
1729	RN8009	B5E	3005051010010	100Ω
1730	RN8010	B5E	3005051010010	100Ω
1731	RN8011	B5E	3005051010010	100Ω
1732	RT3001	T2D	3003061040000	100KΩ
1733	S3001	B3D	6203269000000	RD620 PA radiator 00 (RoHS)(REACH)
1734	SPG-T1	B5B	5499000001020	Three-level gas discharge tube 3RL090M-5/S
1735	SPG-T2	B6B	5499000001020	Three-level gas discharge tube 3RL090M-5/S
1736	T4001	B9F	3244599189000	Transmission coil 4BLH(020984189) SAGMI(RoHS)
1737	T4002	B9F	3244599189000	Transmission coil 4BLH(020984189) SAGMI(RoHS)
1738	U1000	T5H	3604019000000	PLL IC SKY72310-362LF
1739	U1002	T4H	3616010000000	Switch IC TS5A3159DCKR
1740	U1004	T4H	3616059000000	Switch IC FSA66P5X 1-level
1741	U1005	T9B	3616059000000	Switch IC FSA66P5X 1-level
1742	U1006	T8B	3604019000000	PLL IC SKY72310-362LF
1743	U1007	T9B	3616010000000	Switch IC TS5A3159DCKR
1744	U3001	T3G	3605025000020	Operational amplifier AD8566ARMZ
1745	U3002	T2G	3605002054590	Operational amplifier TA75W01FU(TE12L.F)
1746	U3003	T3H	3605008005070	Operational amplifier NJM2904V
1747	U4001	T9F	3605002057090	Operational amplifier TA75S01F(TE85L.F)
1748	U5001	T8E	3603999000000	IF Processor IC AD9864
1749	U6001	T8C	3608006000000	Power managementIC RP102N331B-TR-FF LDO
1750	U6002	T6B	3608010000350	[MSD3] Power management IC TPS5430DDA BUCK DC-DC
1751	U6003	B6B	3608010000020	Power managementIC TPS65021
1752	U6004	B6F	3609010000210	Reset IC TPS3705-33DR
1753	U6005	T8B	3608015000060	Power management IC XC6209F502PR LDO
1754	U6008	T8H	3608015000060	Power management IC XC6209F502PR LDO
1755	U6009	T5F	3608015000060	Power management IC XC6209F502PR LDO
1756	U6010	T4F	3608006000000	Power managementIC RP102N331B-TR-FF LDO
1757	U6011	T5B	3608010000350	[MSD3] Power management IC TPS5430DDA BUCK DC-DC
1758	U6015	B6F	3605008005070	Operational amplifier NJM2904V
1759	U6023	T8H	3608015000210	Power management IC XC6209F332PR LDO
1760	U6105	T4D	3608011000090	Power management IC LT1764AEQ#(TR)PBF
1761	U7001	T6G	3610010000010	MCU OMAP5912ZZG
1762	U7002	T5G	3612999000290	NOR-FLASH+PSRAM

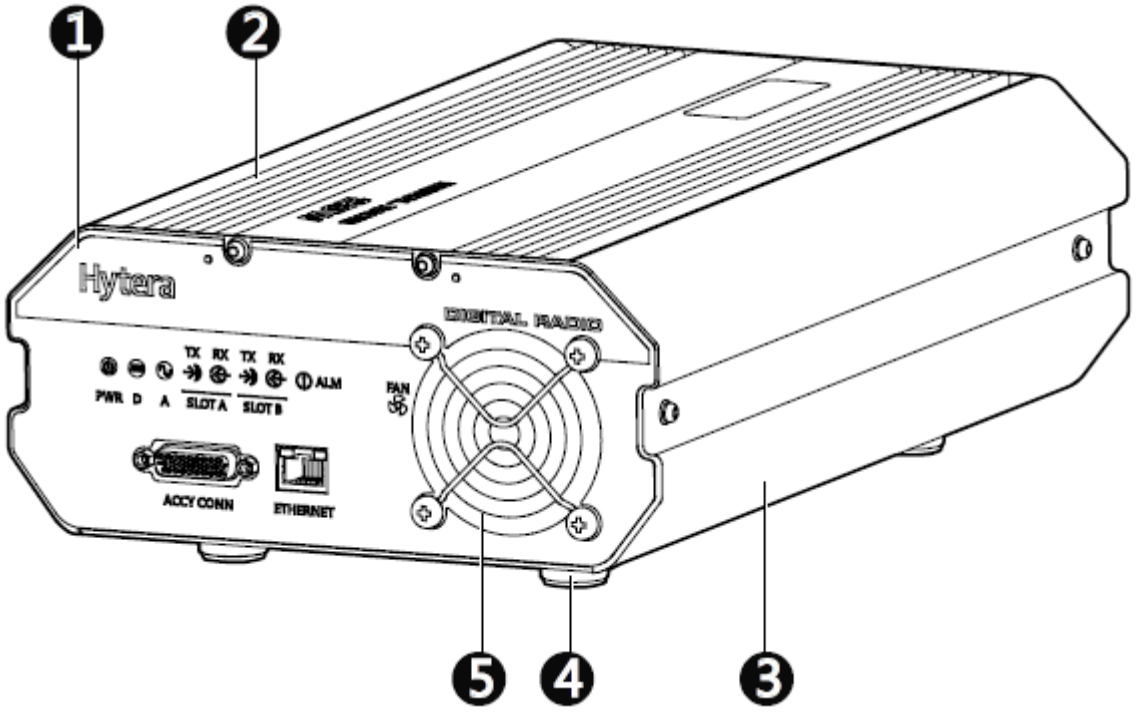
No.	Ref No.	Print No.	Part No.	Description
1763	U7003	T6H	3612044000010	Storage MT48H8M16LFB4-75 IT Mobile-SDRAM
1764	U7004	T6E	3610010000010	MCU OMAP5912ZZG
1765	U7005	T6E	3612999000290	NOR-FLASH+PSRAM
1766	U7006	T6E	3612044000010	Storage MT48H8M16LFB4-75 IT Mobile-SDRAM
1767	U7007	B8C	3607023000150	Logic IC 74AHCT594PW series-parallel switchedIC
1768	U7009	T7D	3699113000010	SP3232EEA RS232
1769	U7011	T5D	3699053000000	SmartSwitch AAT4618IGV-0.5-T1
1770	U7022	B7H	3607023000150	Logic IC 74AHCT594PW series-parallel switchedIC
1771	U8003	T5F	3606010000010	D/A switching IC TLV5614IPWRG4
1772	U8007	T7F	3606010000010	D/A switching IC TLV5614IPWRG4
1773	U8009	B7F	3605008005070	Operational amplifier NJM2904V
1774	U8010	B7H	3613010000000	BB management IC TLV320AIC29IRGZR CODEC
1775	U8012	B5E	3609999007670	Connector-controller LAN9311i-NZW
1776	U8013	B7F	3605008005070	Operational amplifier NJM2904V
1777	U8101	B5C	5406000000120	Transformer HX1260 POE Standard 1:1 SOIC-16 pulse
1778	U8104	B5C	3310350000020	TVS Protection Diode SLVU2.8-4.TBT
1779	X1000	T5G	3804019250000	VCO DSA321SDA(VC-TCXO) 19.2MHz
1780	X1001	T8C	3804019250000	VCO DSA321SDA(VC-TCXO) 19.2MHz
1781	X7001	T7E	3701019250040	Crystal oscillator DSB321SDA 19.2MHz
1782	X7002	T6F	3701327610060	Crystal SSP-T7F 32.768KHz
1783	X7003	T6D	3701327610060	Crystal SSP-T7F 32.768KHz
1784	X8001	B5D	3701002560000	Crystal DSX321G-25.000
1785	Z4001	T9E	3802733540030	Crystal filter D73312GQ22 73.35MHz

VHF (136 - 174MHz)

Contents

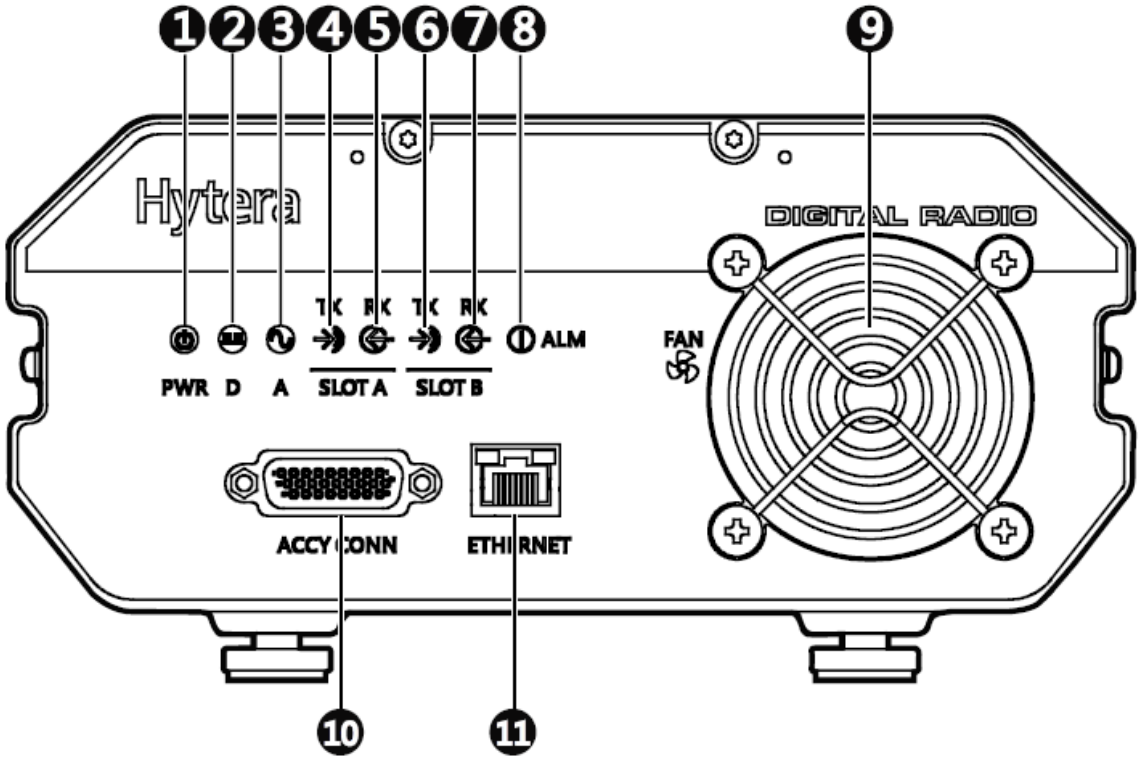
1. Product Overview

Parts



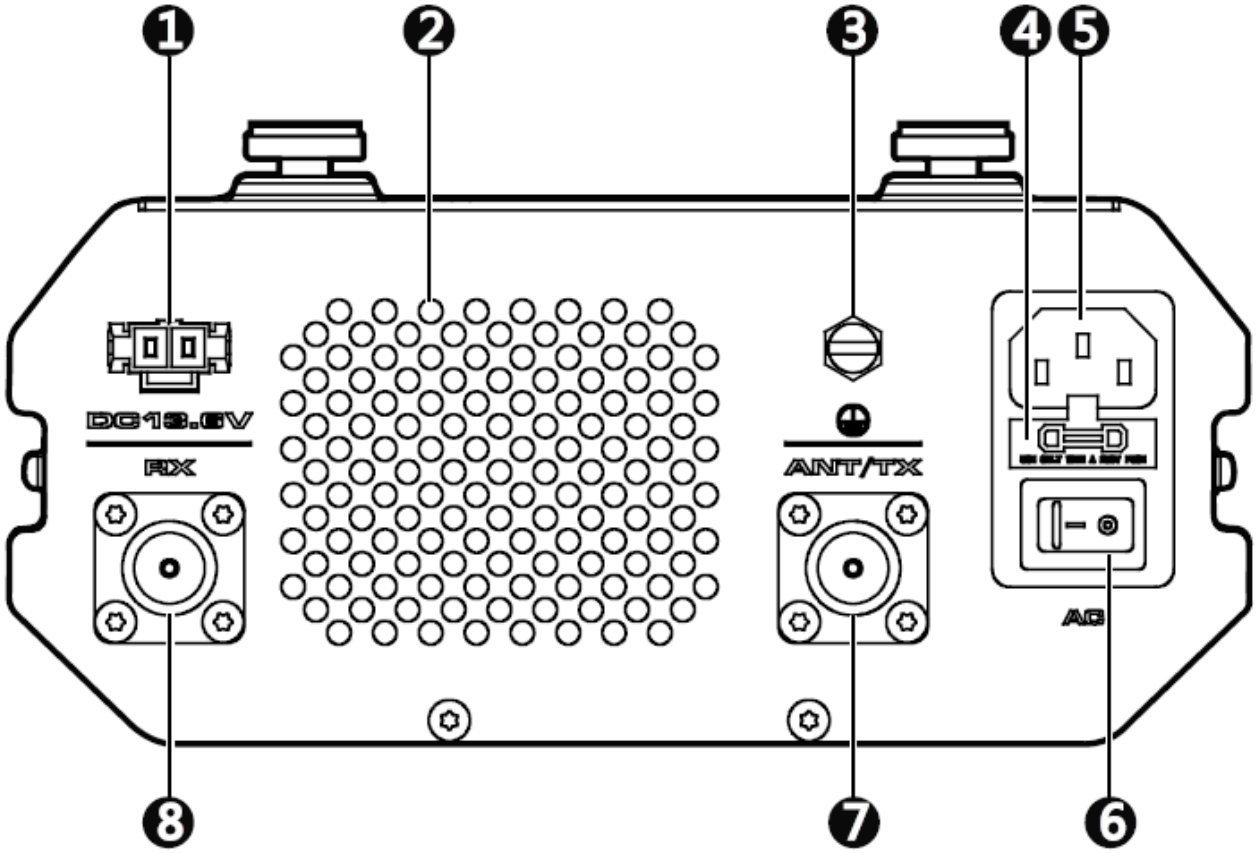
No.	Part Name	No.	Part Name
1	Front Panel	4	Foot Pad
2	Upper Cover	5	Fan Mesh Enclosure
3	Chassis	-	-

Front Panel



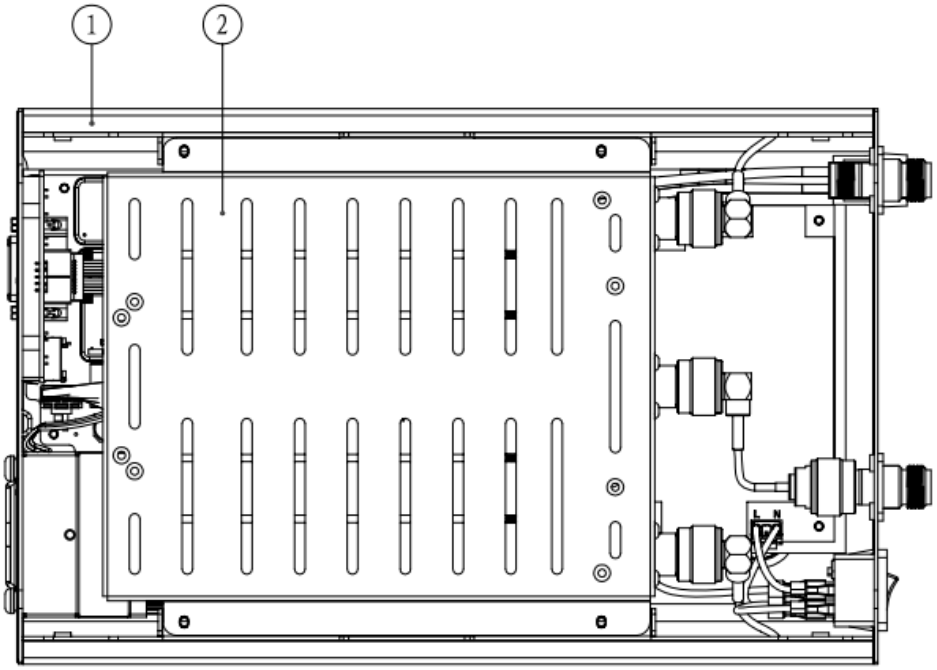
No.	Part Name	No.	Part Name
1	Power LED Indicator	7	Slot B RX LED Indicator
2	Digital Mode LED Indicator	8	Alarm LED Indicator
3	Analog Mode LED Indicator	9	Fan Inlet
4	Slot A TX LED Indicator	10	Accessory Connector
5	Slot A RX LED Indicator	11	Ethernet Interface
6	Slot B TX LED Indicator	-	-

Rear Panel

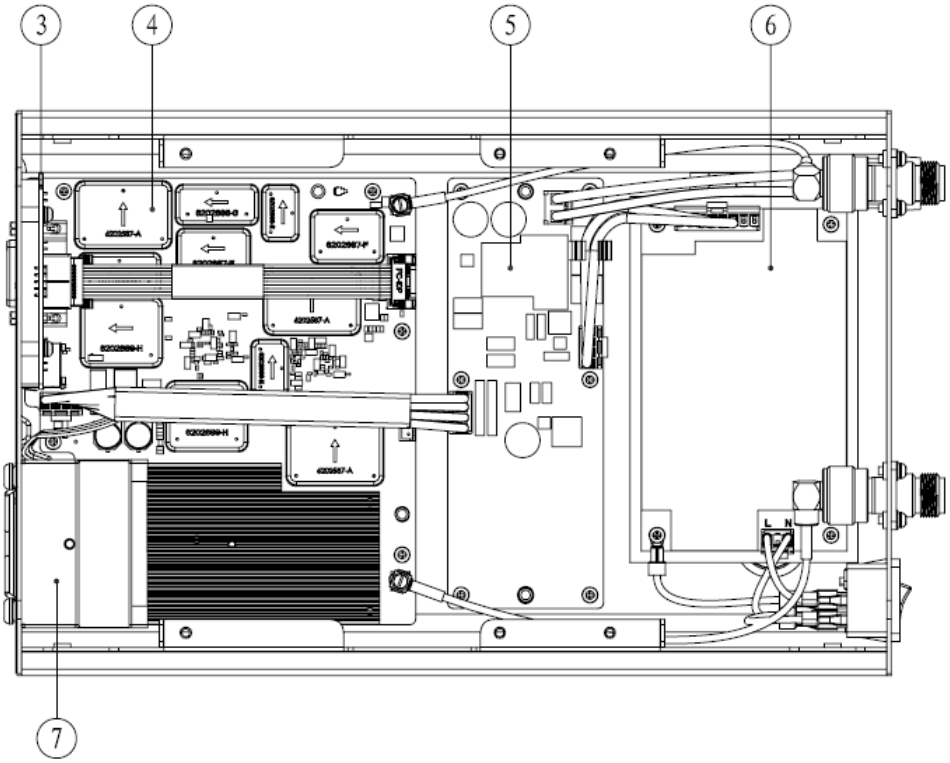


No.	Part Name	No.	Part Name
1	DC Power Inlet	5	AC Power Inlet
2	Fan Outlet	6	AC Power Switch
3	Ground Terminal	7	ANT/TX Antenna Connector (N-type, Female)
4	Fuse Box	8	RX Antenna Connector (N-type, Female)

Internal Parts (including duplexer)



Internal Parts (excluding duplexer)



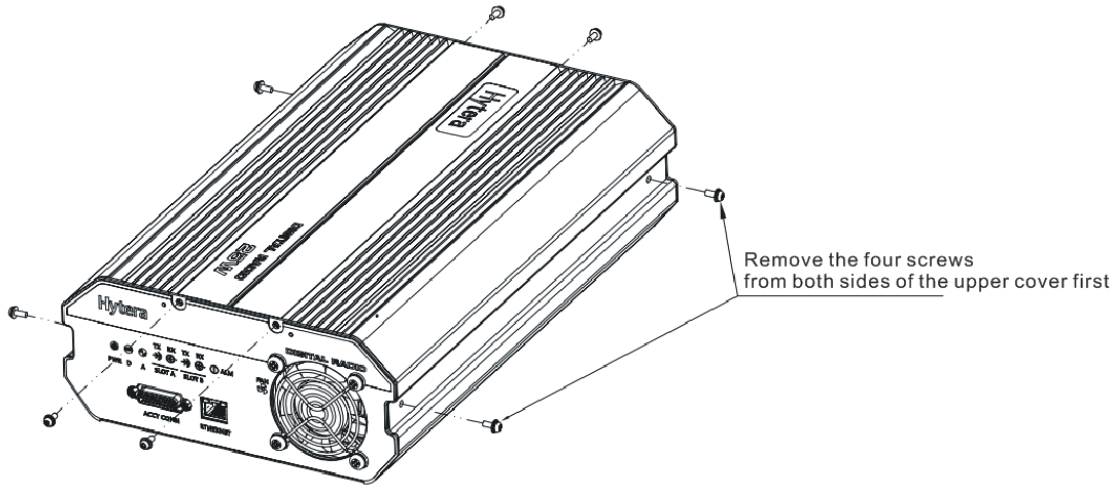
No.	Part Name	No.	Part Name
1	Main Body	5	Floating Charge PCB
2	Duplexer Module	6	Switching Power Module
3	LED Indicator PCB	7	Fan Module
4	Main PCB	-	-

2. Disassembly and Assembly

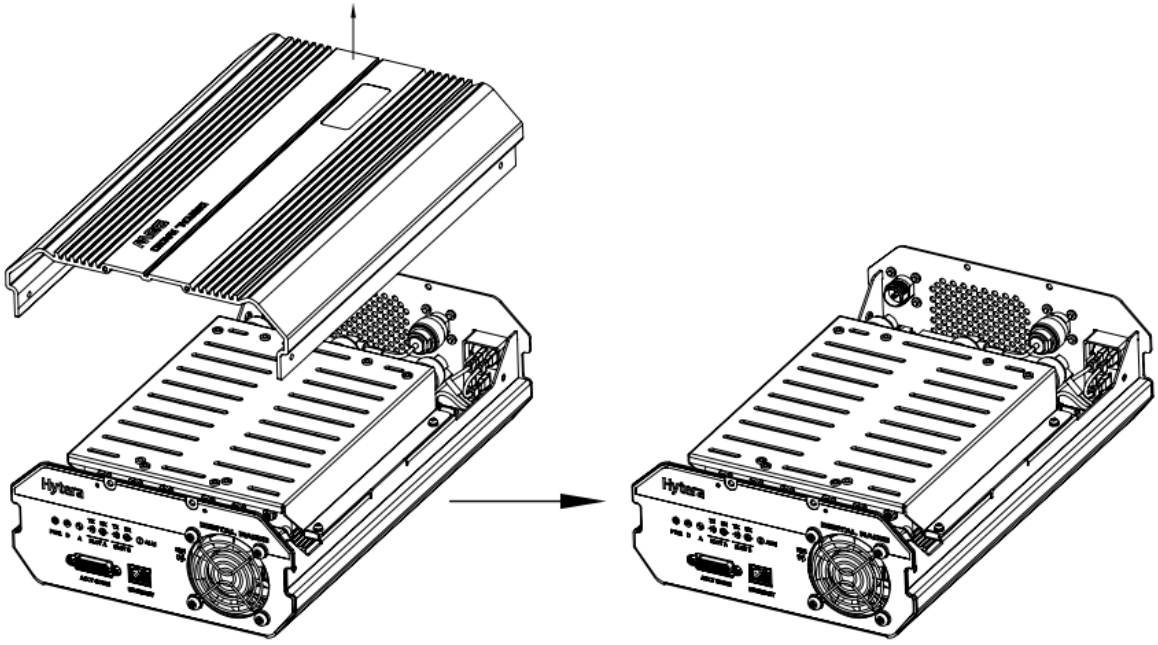
2.1 Disassembling

Step 1 Turn off the repeater and detach the power cord, antenna and Ethernet cable.

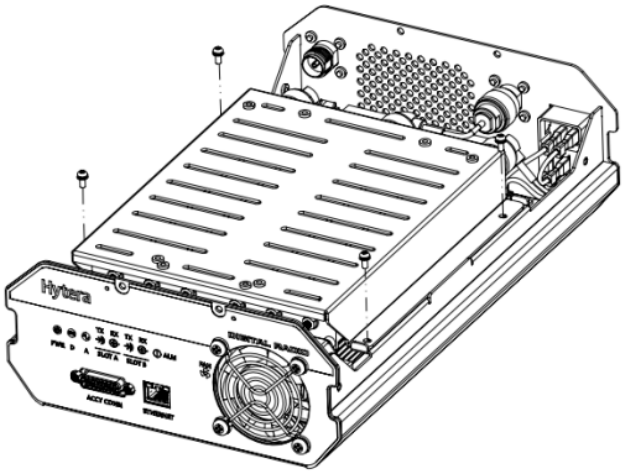
Step 2 Remove the four screws from both sides of the upper cover first, and then remove the four screws from front and rear panel.



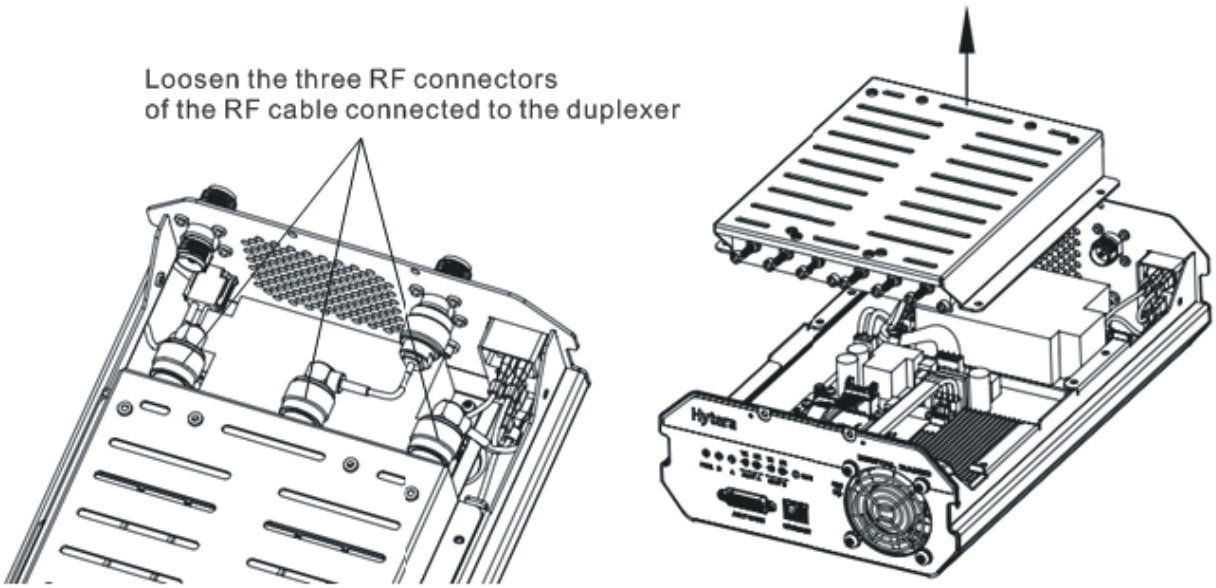
Step 3 Lift up the upper cover horizontally and remove it. Move to Step 7 if the repeater is not equipped with duplexer module.



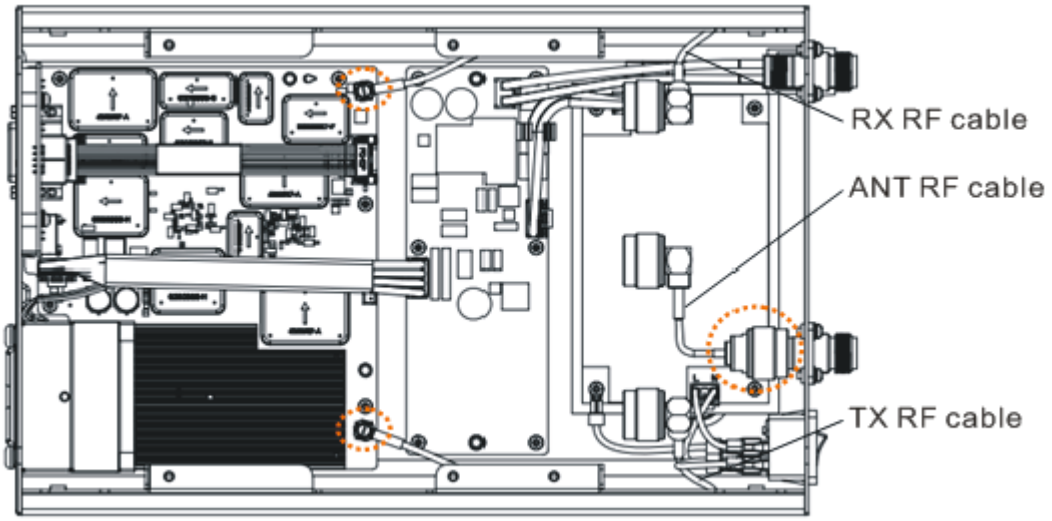
Step 4 Remove the four screws fixing the duplexer bracket.



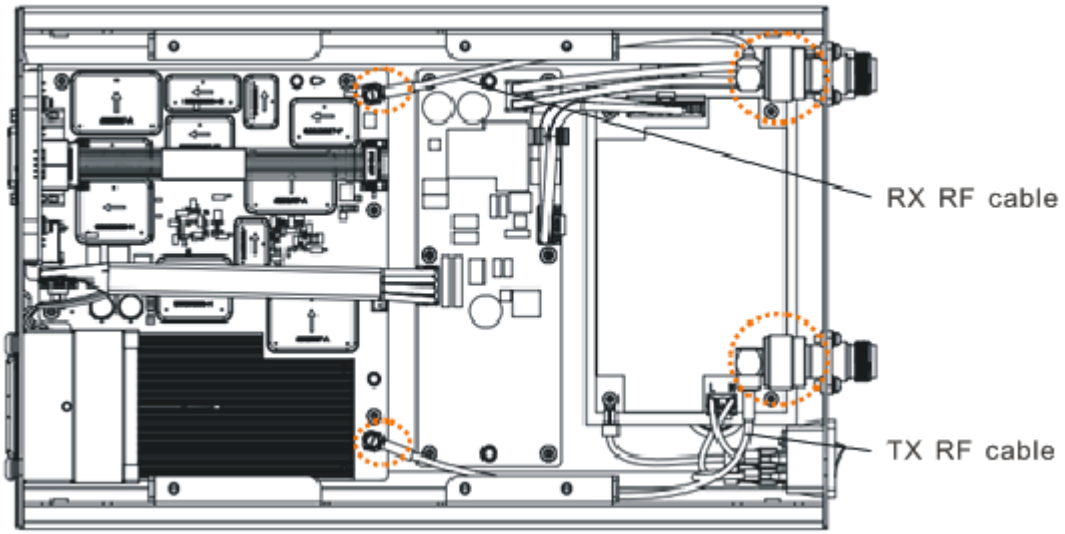
Step 5 Loosen the three RF connectors of the RF cable connected to the duplexer, and then lift up to take out the duplexer module.



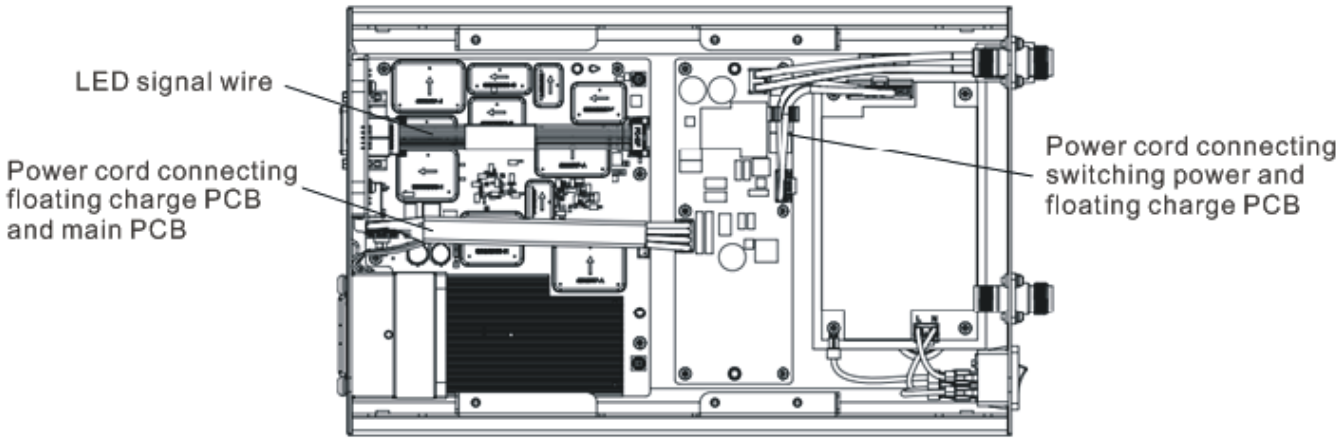
Step 6 Loosen the RF connectors marked in the figure below and remove the three RF cables.



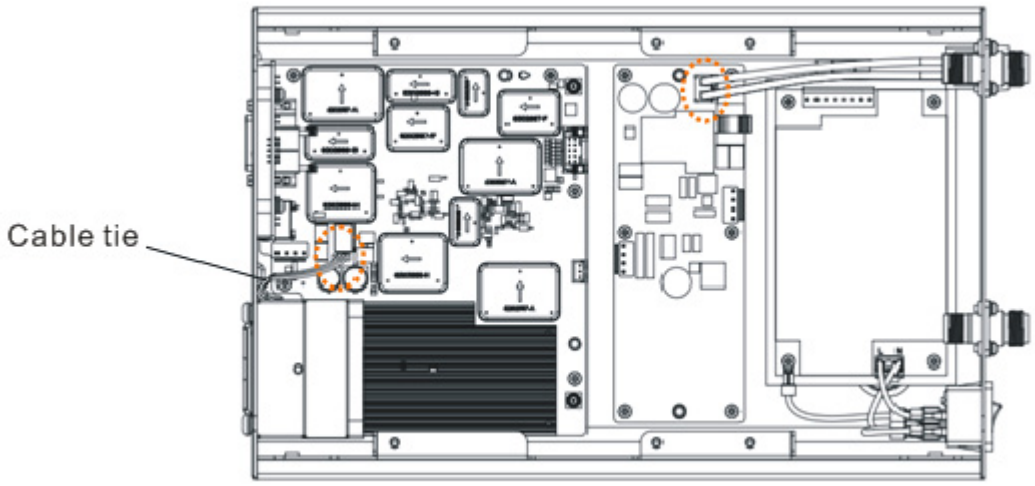
Step 7 Loosen the RF connectors marked in the figure below and remove the two RF cables.



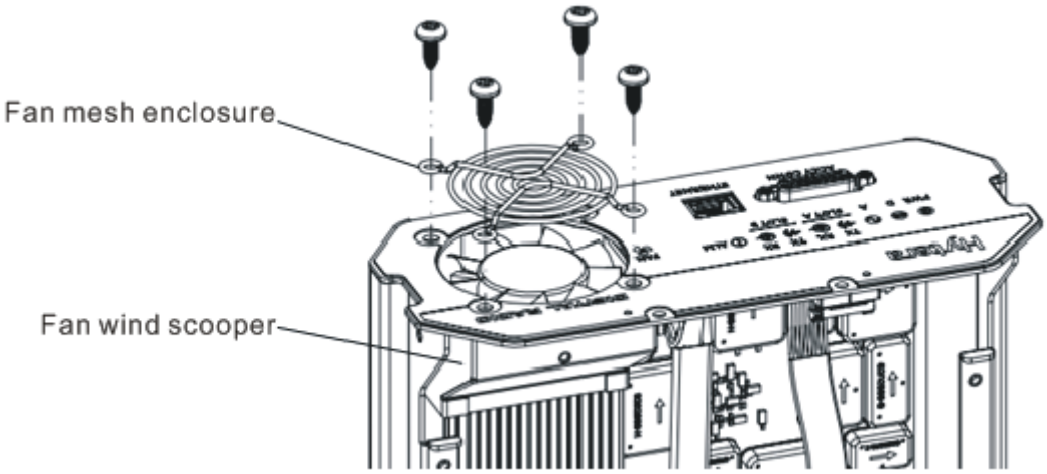
Step 8 Remove the power cords and signal wire marked in the figure below.



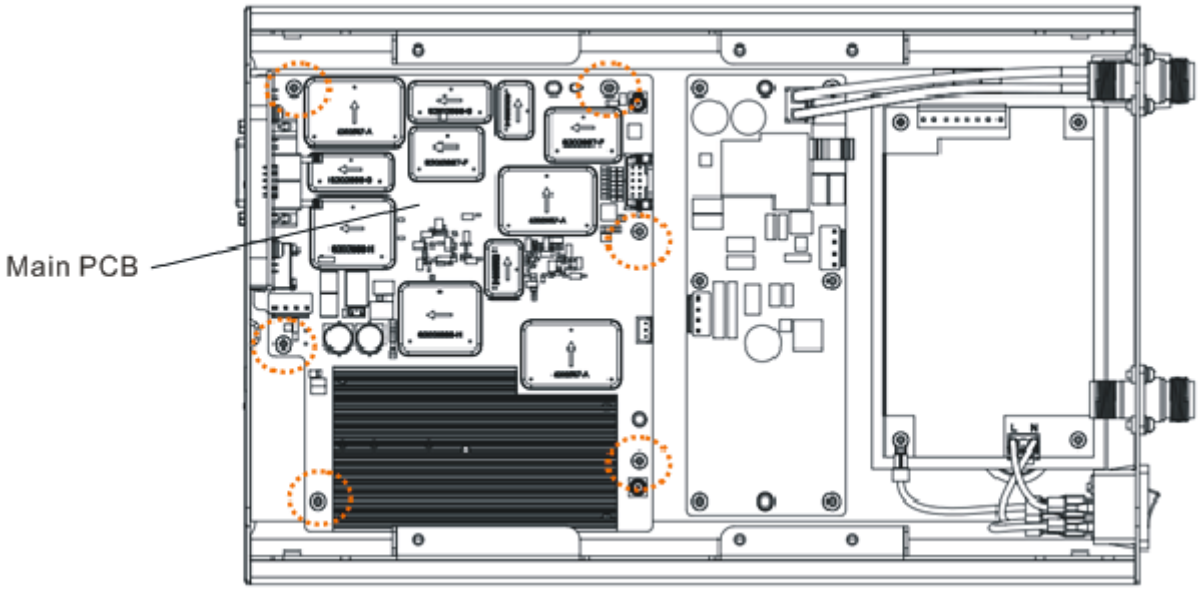
Step 9 Remove the power cord connector marked in the figure below. Cut the cable tie marked in the figure below for convenient operation afterwards.



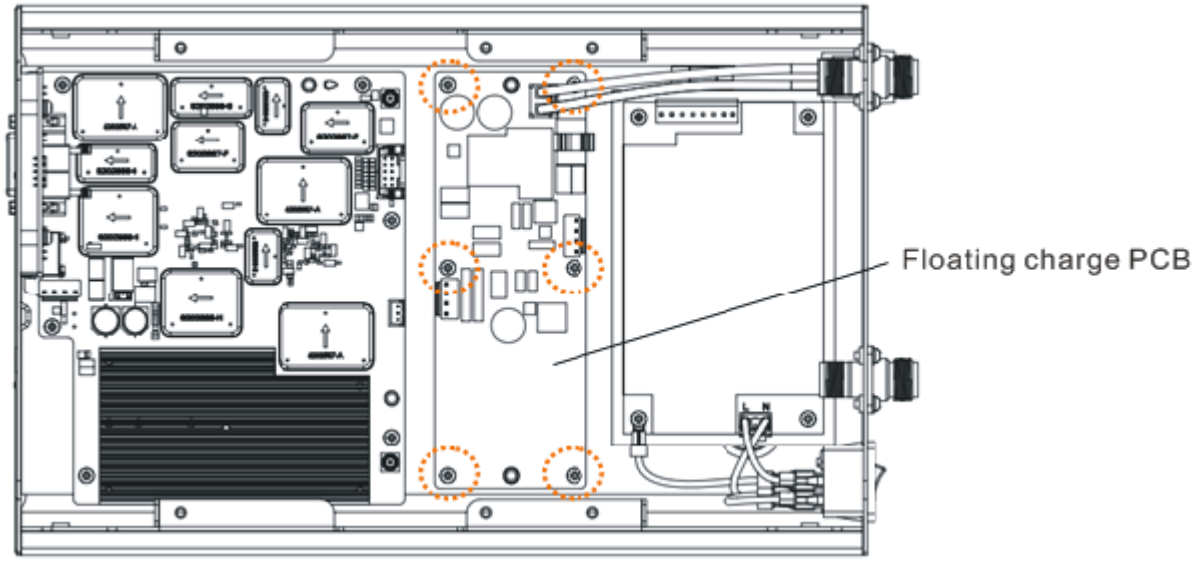
Step 10 Remove the four screws fixing the fan module and then take out the fan mesh enclosure and wind scooper.



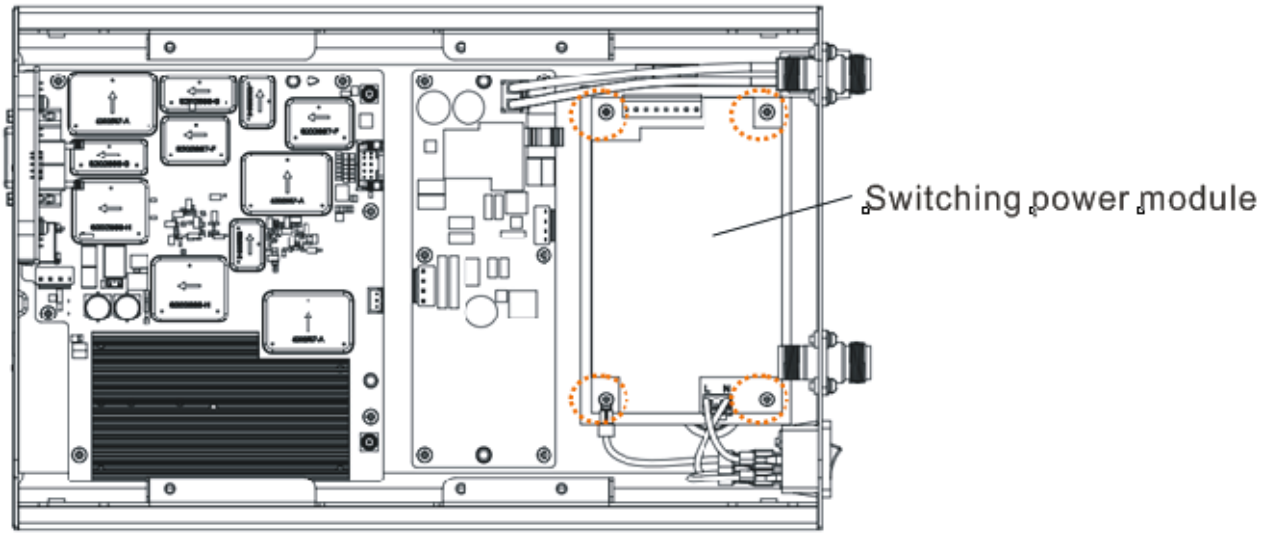
Step 11 Remove the six screws marked in the figure below and take out the Main PCB. Tilt to the upper right slightly when taking out the Main PCB.



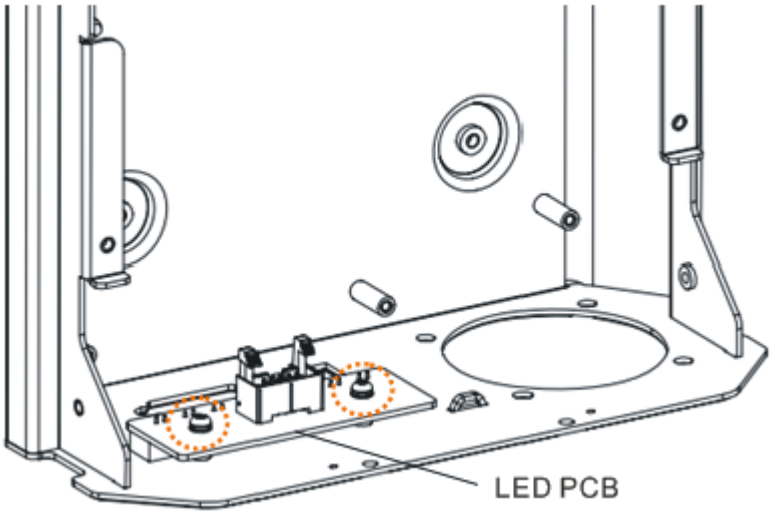
Step 12 Remove the six screws marked in the figure below and take out the Floating Charge PCB.



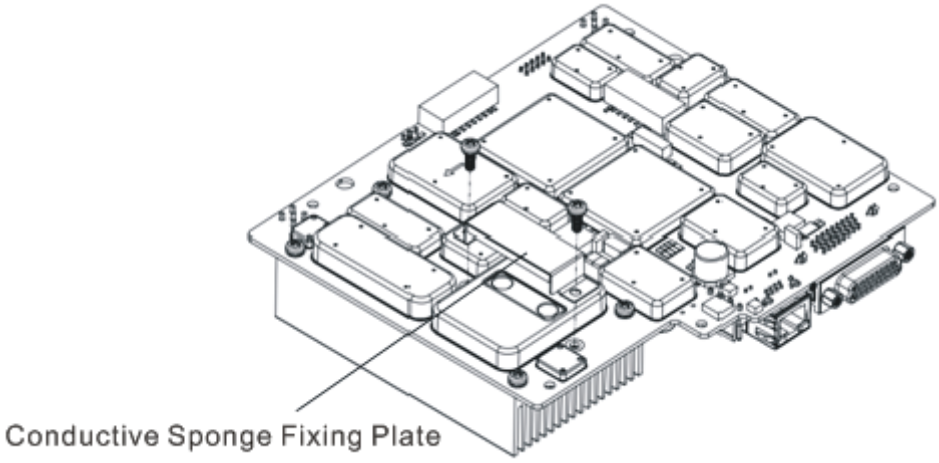
Step 13 Remove the four screws marked in the figure below and take out the Switching Power Module.



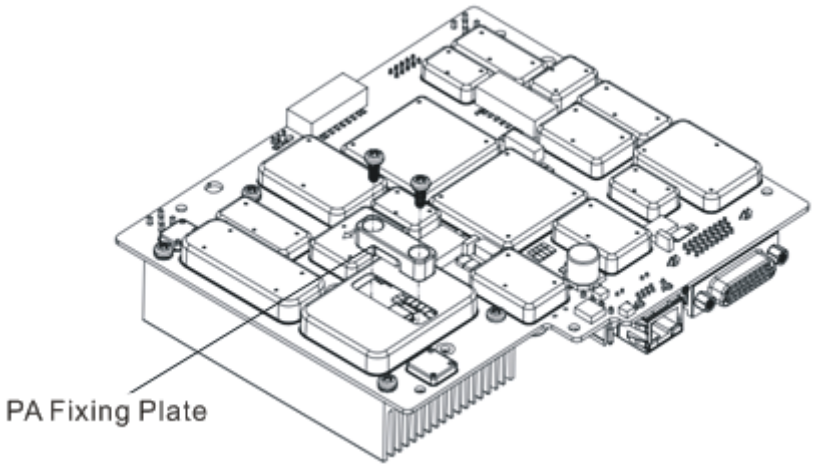
Step 14 Remove the two screws marked in the figure below and take out the LED PCB.



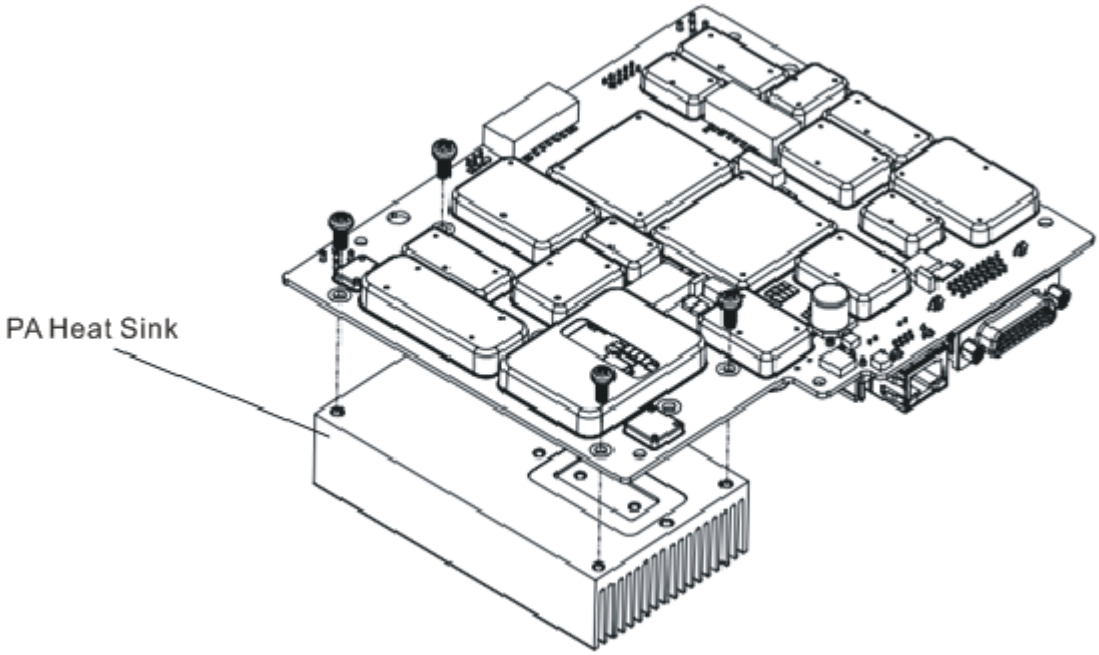
Step 15 Remove the two screws marked in the figure below, lift up and take out the Conductive Sponge Fixing Plate.



Step 16 Remove the two screws marked in the figure below and take out the PA Fixing Plate.

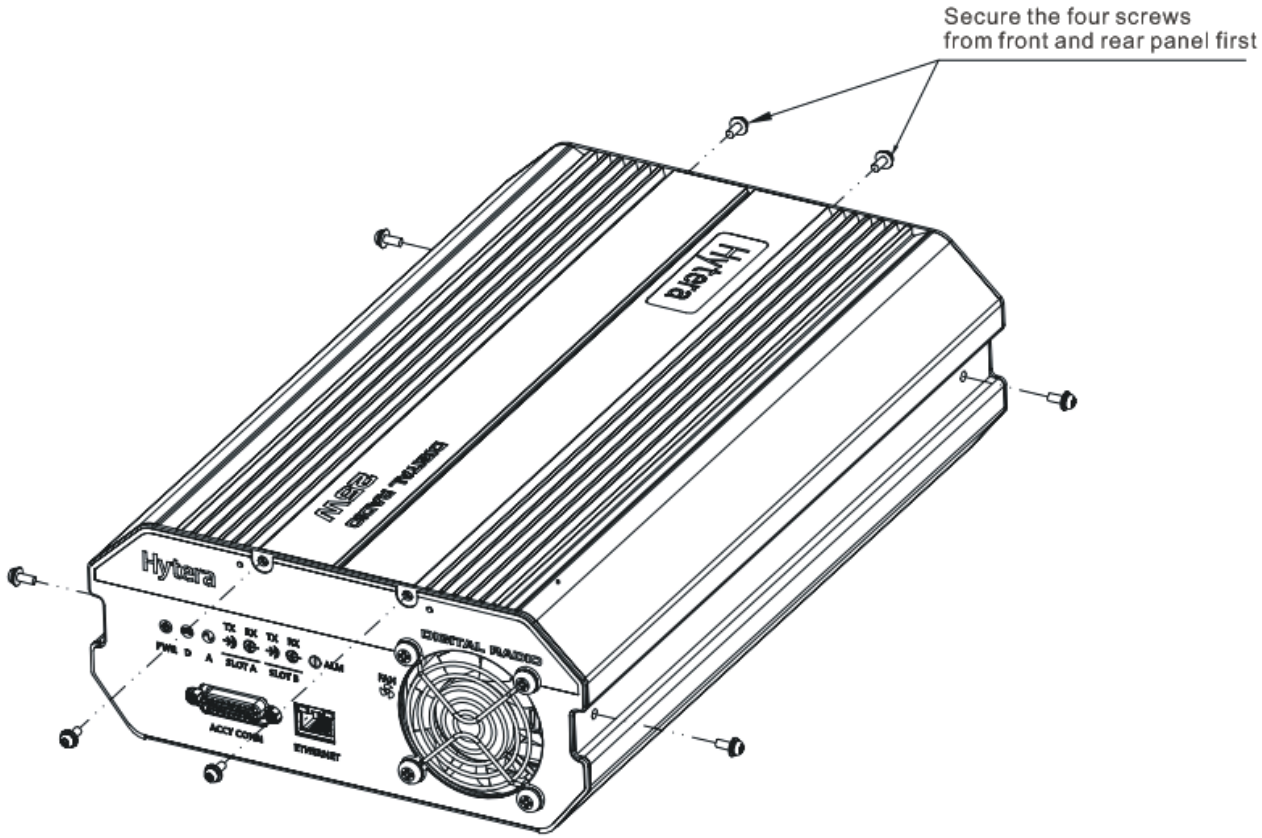


Step 17 Remove the four screws marked in the figure below and take out the PA Heat Sink.



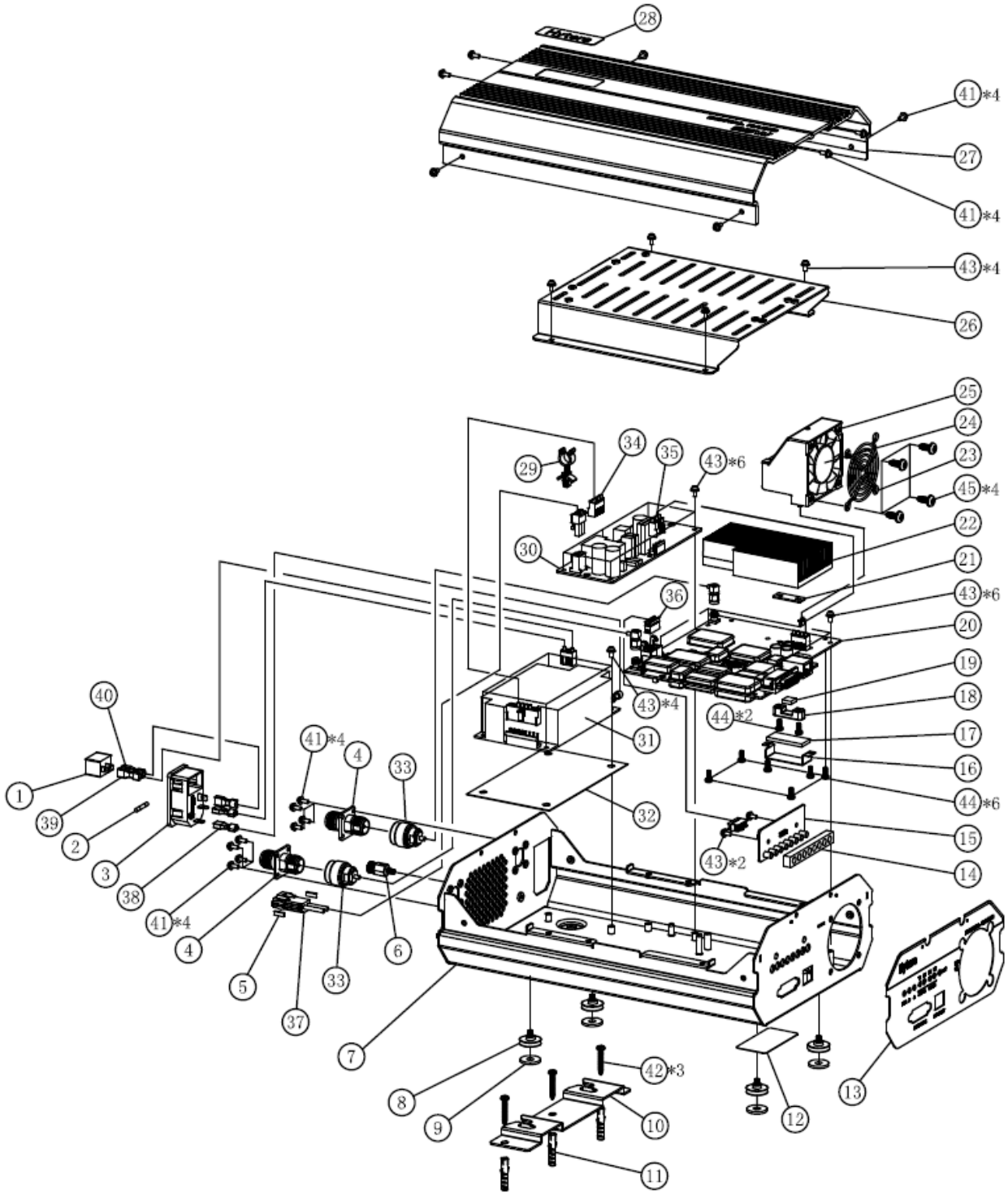
2.2 Assembling

To assemble the repeater after disassembling, perform the above steps in a reversed order. Please note that when securing the screws on the upper cover, secure the four screws from front and rear panel first, and then secure the four screws from both sides of the upper cover.


Secure the four screws
from front and rear panel first
Hytera
Hytera
DIGITAL RADIO

3. Exploded View and Packaging Guide

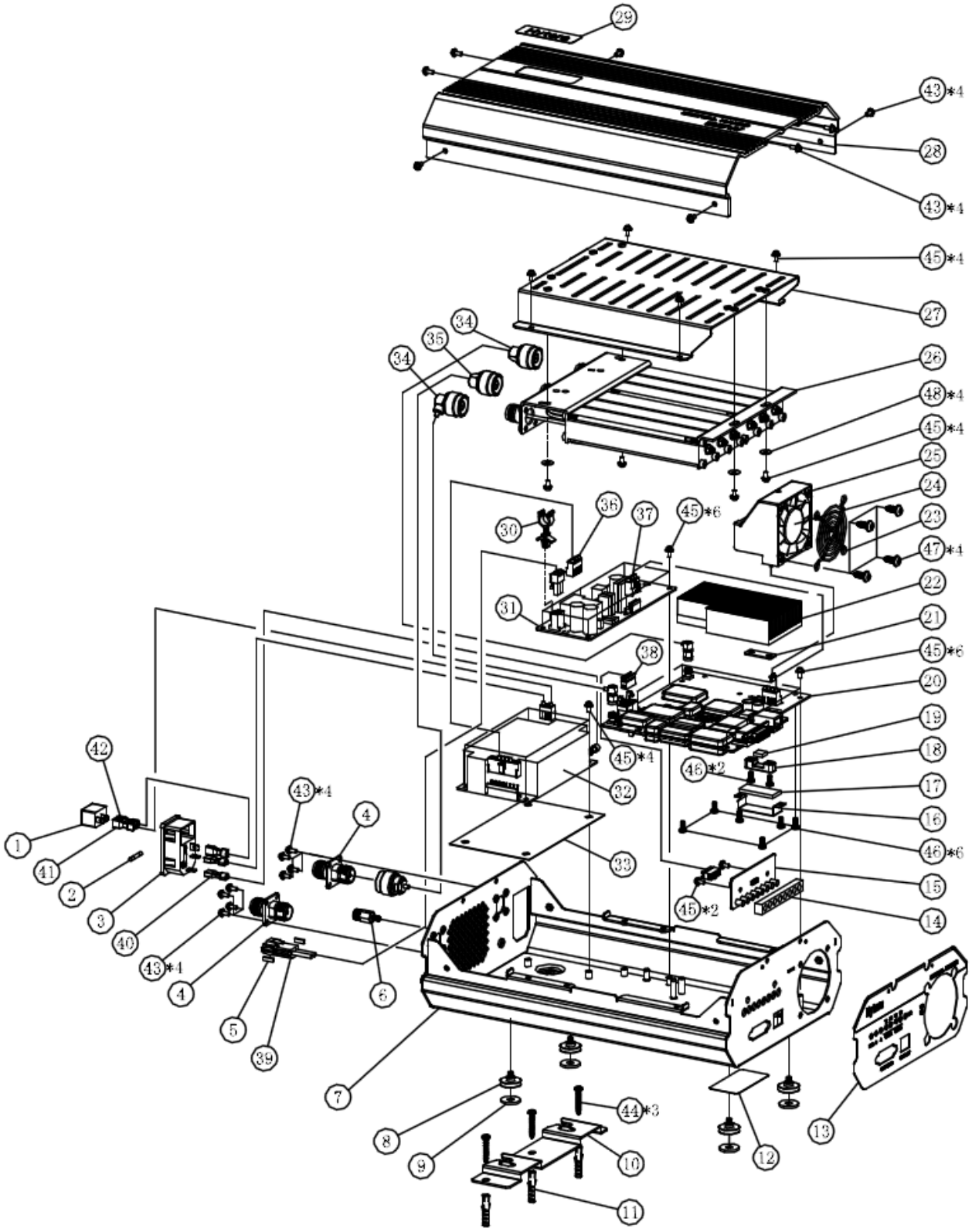
3.1 Exploded View (excluding duplexer)



Parts list:

No.	Part No.	Part Name	Qty.	No.	Part No.	Part Name	Qty.
1	4399010000000	Power Switch	1	24	5401000000200	Fan	1
2	4099000000150	Fuse	1	25	6203267000000	Fan Wind Scooper	1
3	5205003100210	AC Power Socket	1	26	6203268000000	Duplexer Fixing Bracket	1
4	4408100002000	Adapter RF Connector	2	27	6203265000000	Upper Cover	1
5	7500663000000	Connector Silicone Rubber Pad for DC Power Input Port	2	28	86RD960600000	Hytera Logo Label	1
6	7104008000600	Ground Terminal	1	29	7500660000000	Cable Hanger	1
7	6203264000010	Bottom Case	1	30	1615000000290	Floating Charge Board	1
8	7104005000010	Wall-mount Screws	4	31	1615000000280	Switching Power	1
9	6100994000000	Foot Pad	4	32	7400556000000	Bottom Insulation Pad for Switching Power Module	1
10	6203271000000	Wall-mount Bracket	1	33	4220190000400	RF Cable	2
11	75007610000000	Plastic Wall Anchor	3	34	4200210000000	Power Cord	1
12	86RD960100010	Blank Battery Label	1	35	4200210000100	Power Cord	1
13	86RD620700000	Front Panel Label	1	36	4210160000300	Signal Cable	1
14	7500662000000	LED Shading Pad	1	37	4200180001400	Power Cord	1
15	1302RD6200040	LED board, semi-finished, manually soldered	1	38	4200090000200	Power Cord	1
16	6203270000000	Conductive Sponge Fixing Plate for PA Shielding Mask	1	39	4200090000400	Power Cord	1
17	7500549000000	Conductive Sponge for PA Shielding Mask	1	40	4200090000300	Power Cord	1
18	6300189000000	PA Fixing Plate	1	41	7103008001000	Screws (M3.0*8.0mm)	16
19	7500661000000	PA Silicone Rubber Pad	1	42	7103925020000	Self-tapping Screws (ST3.9*25mm)	3
20	1302RD6200010	Main board, semi-finished, manually soldered	1	43	7103007000000	Screws (M3.0*7.0mm)	22
21	6203269000000	PA Heat Sink Pad	1	44	7103008000400	Screws (M3.0*8.0mm)	8
22	6203266000000	PA Heat Sink	1	45	7105012020000	Self-tapping Screws (ST5.0*12mm)	4
23	7000393000000	Fan Protective Cover	1	-	-	-	-

3.2 Exploded View (including duplexer)

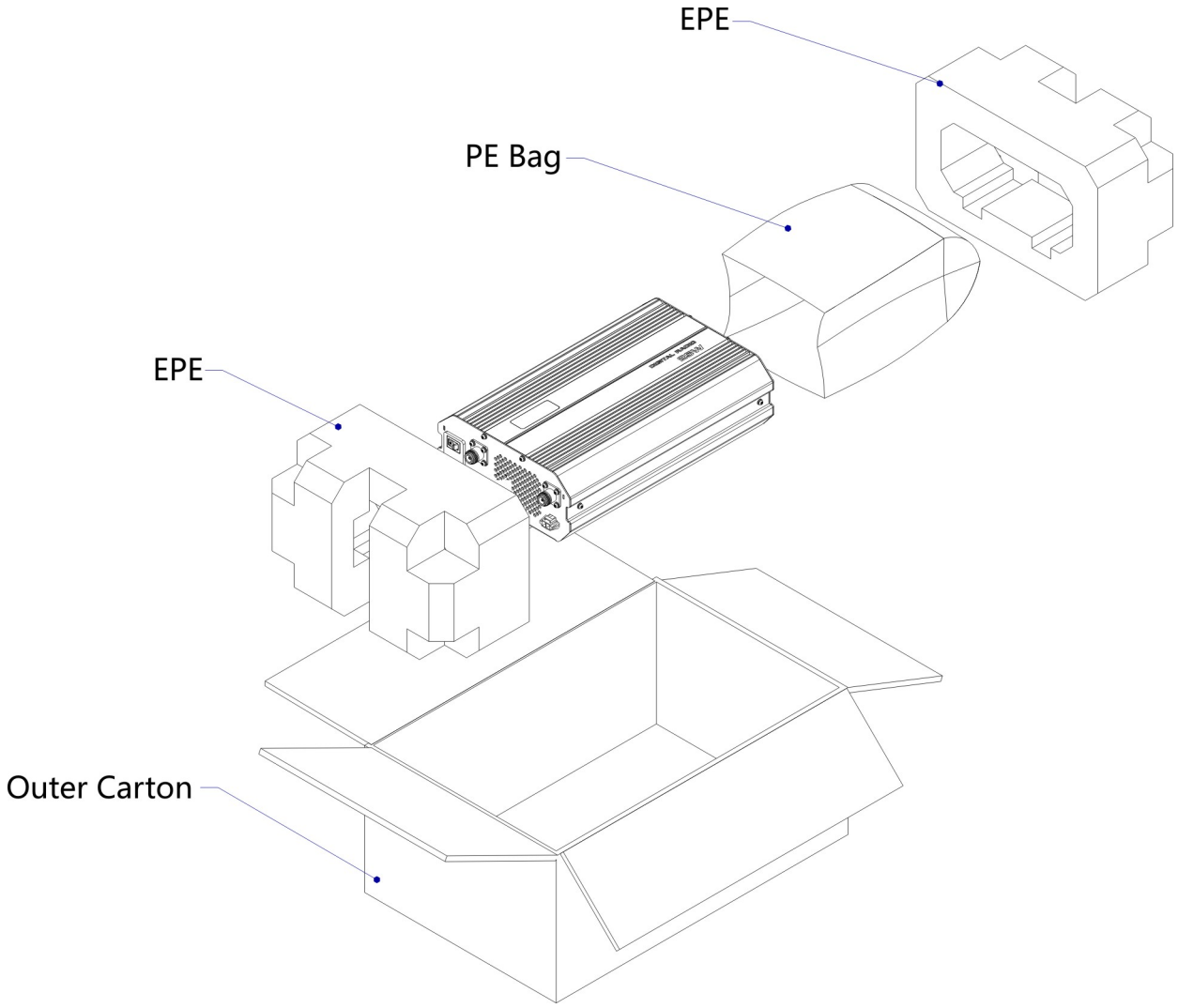


Parts list:

No.	Part No.	Part Name	Qty.	No.	Part No.	Part Name	Qty.
1	4399010000000	Power Switch	1	25	6203267000000	Fan Wind Scooper	1
2	4099000000150	Fuse	1	26	3804384770009	Duplexer	1
3	5205003100210	AC Power Socket	1	27	6203268000000	Duplexer Fixing Bracket	1
4	4408100002000	Adapter RF Connector	2	28	6203265000000	Upper Cover	1
5	7500663000000	Connector Silicone Rubber Pad for DC Power Input Port	2	29	86RD960600000	Hytera Logo Label	1
6	7104008000600	Ground Terminal	1	30	7500660000000	Cable Hanger	1
7	6203264000010	Bottom Case	1	31	1615000000290	Floating Charge Board	1
8	7104005000010	Wall-mount Screws	4	32	1615000000280	Switching Power	1
9	6100994000000	Foot Pad	4	33	7400556000000	Bottom Insulation Pad for Switching Power Module	1
10	6203271000000	Wall-mount Bracket	1	34	4220190000400	RF Cable	2
11	75007610000000	Plastic Wall Anchor	3	35	4220083000000	RF Cable	1
12	86RD960100010	Blank Battery Label	1	36	4200210000000	Power Cord	1
13	86RD620700000	Front Panel Label	1	37	4200210000100	Power Cord	1
14	7500662000000	LED Shading Pad	1	38	4210160000300	Signal Cable	1
15	1302RD6200040	LED board, semi-finished, manually soldered	1	39	4200180001400	Power Cord	1
16	6203270000000	Conductive Sponge Fixing Plate for PA Shielding Mask	1	40	4200090000200	Power Cord	1
17	7500549000000	Conductive Sponge for PA Shielding Mask	1	41	4200090000400	Power Cord	1
18	6300189000000	PA Fixing Plate	1	42	4200090000300	Power Cord	1
19	7500661000000	PA Silicone Rubber Pad	1	43	7103008001000	Screws (M3.0*8.0mm)	16
20	1302RD6200010	Main board, semi-finished, manually soldered	1	44	7103925020000	Self-tapping Screws (ST3.9*25mm)	3
21	6203269000000	PA Heat Sink Pad	1	45	7103007000000	Screws (M3.0*7.0mm)	22
22	6203266000000	PA Heat Sink	1	46	7103008000400	Screws (M3.0*8.0mm)	8
23	7000393000000	Fan Protective Cover	1	47	7105012020000	Self-tapping Screws (ST5.0*12mm)	4

No.	Part No.	Part Name	Qty.	No.	Part No.	Part Name	Qty.
24	5401000000200	Fan	1	48	6201585000000	Pad M3*0.8mm*0D10mm	4

3.3 Packaging Guide



4. Specification

Key specifications for VHF are shown in the table below:

General	
Frequency Range	136 - 174MHz
Channel Capacity	16
Channel Spacing	12.5KHz /20 KHz /25 KHz
Operating Voltage	13.6±15% V DC 90 - 264 V AC
Current Drain	Standby Current<0.5 A Transmitting Current<5.5 A
Frequency Stability	±0.5 ppm
Antenna Impedance	50Ω
Operating Temperature	-30℃ - +60℃
Dimension (H×W×D)	348 x 210 x 108 mm
Weight	5Kg
Transmitter	
Power Output	1 - 25W
Conducted/Radiated Spurious Emission	-36dBm < 1GHz -30dBm > 1GHz
FM Modulation	11K0F3E@12.5KHz 14K0F3E@20KHz 16K0F3E@25KHz
4FSK Digital Modulation	12.5KHz (data only): 7K60FXD 12.5kHz (data and voice): 7K60FXW
Modulation Limiting	2.5 KHz@12.5 KHz

	4.0 KHz@20 KHz 5.0 KHz@25 KHz
FM Hum and Noise	-40 dB@12.5 KHz -43 dB@20 KHz -45 dB@25 KHz
Adjacent Channel Power	60 dB@12.5 KHz 70 dB@20/25 KHz
Audio Response	+1 - -3 dB
Audio Distortion	Analog≤3% Digital≤5%
Digital Vocoder Type	AMBE++ or SELP
Digital Protocol	ETSI-TS102 361-1, -2, -3
Receiver	
Sensitivity	Analog: 0.3 μV (12 dB SINAD) 0.22 μV (Typical) (12 dB SINAD) 0.4 μV (20 dB SINAD) Digital: 0.3μV/BER5%
Adjacent Channel Selectivity	TIA-603: 65dB@12.5KHz/75dB@20/25KHz ETSI: 60dB@12.5KHz/75dB@20/25KHz
Intermodulation	TIA-603: 75dB@12.5/20/25KHz ETSI: 70dB@12.5/20/25KHz
Spurious Response Rejection	TIA-603: 75dB@12.5/20/25KHz ETSI: 70dB@12.5/20/25KHz
Blocking	TIA-603: 90dB ETSI: 84dB

Hum and Noise	-40dB@12.5kHz -43dB@20kHz -45dB@25kHz
Max Receiving Audio Power	Internal (20Ω load): 8 W External (8Ω load): 20 W
Rated Audio Distortion	≤3%
Audio Response	+1 - -3 dB
Conducted Spurious Emission	< -57 dBm
Environmental Specifications	
Operating Temperature	-30℃ - +60℃
Storage Temperature	-40℃ - +85 ℃
ESD	IEC 61000-4-2 (level 4) ±2 kV (Contact discharge) ±4 kV (Air discharge)
American Military Standard	MIL-STD-810 C/D/E/F
Dust/Water Protection	IP2
Moisture Proof	MIL-STD-810 C/D/E/F
Shock and Vibration	MIL-STD-810 C/D/E/F

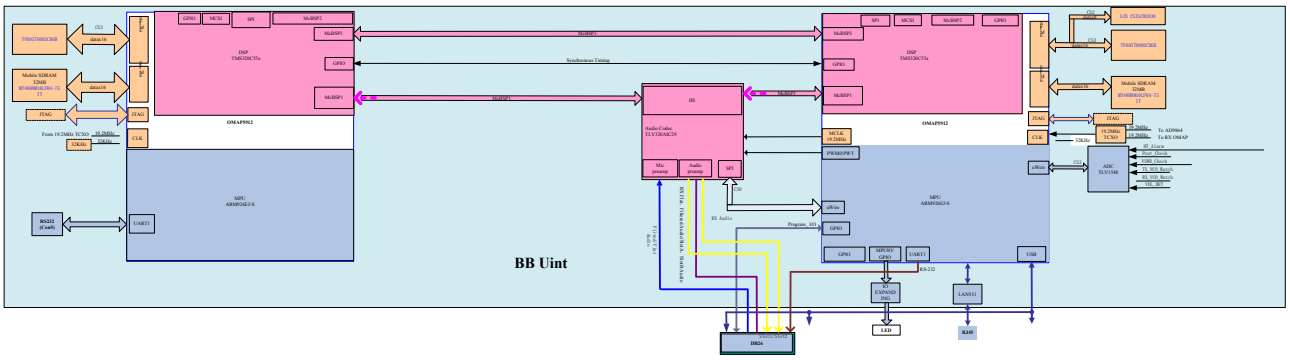
Note: All Specifications are tested according to applicable standards, and subject to change without notice due to continuous development.

5. Circuit Description

5.1 Front Panel

The front panel provides human-machine interaction and is only equipped with 8 LED indicators.

5.2 Baseband



As a highly integrated hardware platform, the control chip (OMAP5912) incorporates two processors: ARM+DSP. With a clock frequency of 19.2MHz, the control chip is of perfect processing performance. OMAP5912 accommodates multiple peripheral interfaces and versatile access methods, making desired functions available via the peripheral equipment.

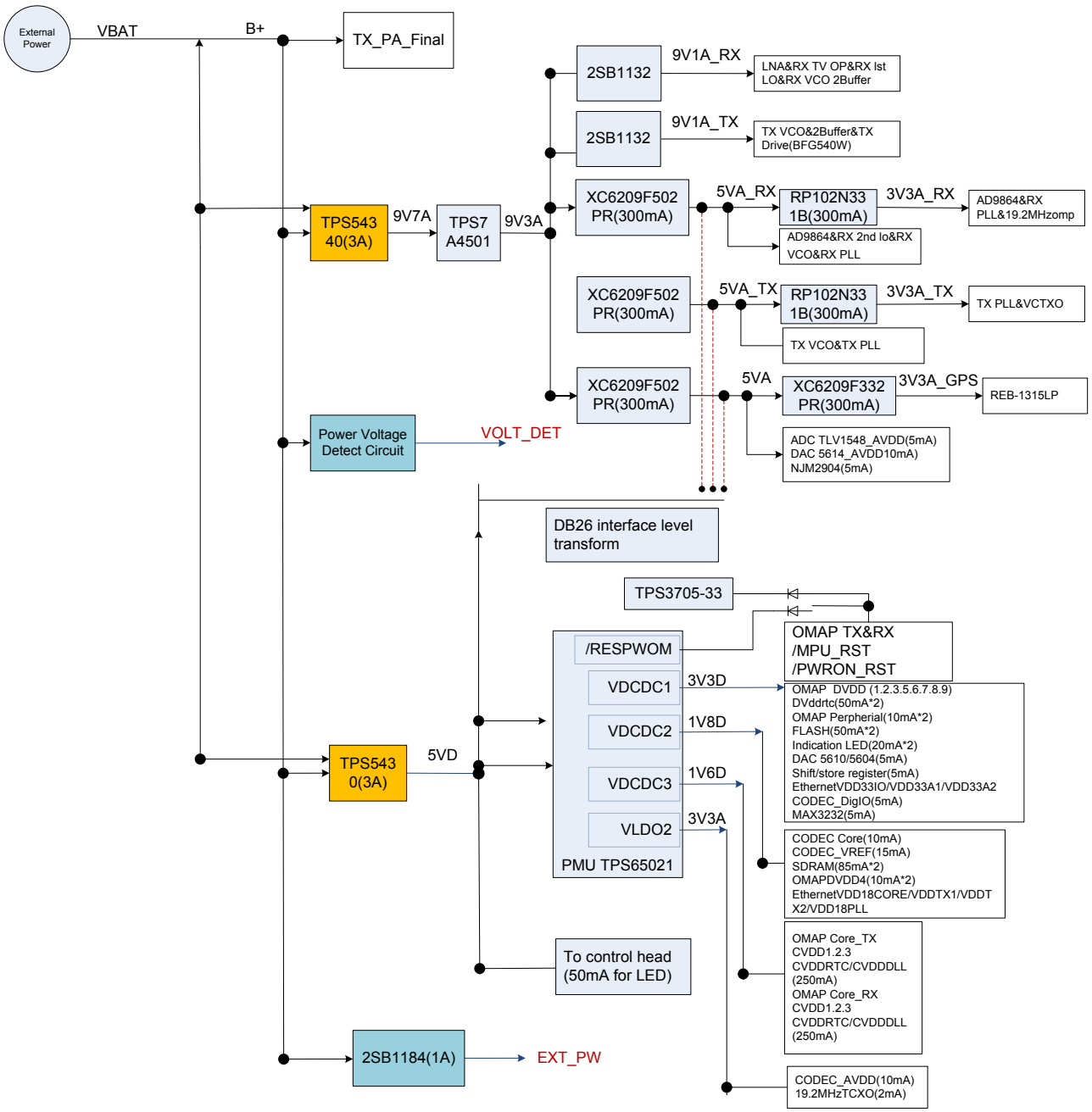
The repeater adopts two OMAPs. One is used as RX OMAP, and the other as TX OMAP. The peripheral equipment is mainly controlled by the ARM of TX OMAP. The functions of RX OMAP and TX OMAP are described below:

- RX OMAP5912
  - ARM processor: Reserved. I^2C and UART signals are reserved for option board.
  - DSP processor: to handle the algorithm of the RX baseband signal, so as to control SPI, MCBSP1 and MCBSP3.
- TX OMAP5912
  - ARM processor: to run the MMI software and part of stack software, so as to control related peripheral equipment such as UART1, UART3, USB, KEYPAD and LED indicators.
  - DSP processor: to handle the algorithm of the TX baseband signal, so as to control SPI, MCBSP1 and MCBSP3.

5.2.1 Power Supply Module

Power supply module is mainly composed of two parts.

- The power supply provides RF circuit with 9.3V through DC-DC converter and LDO. Each module of RF circuit is powered by the 9.3V through LDO again.
- The power supply provides the baseband board with 3.3v/1.8v/1.6v through DC-DC connector and PMU.



5.2.2 Control Module

Reset

When the product is powered on, the PMU will generate a reset signal “PWR_RST” to reset RX OMAP and TX OMAP. See the figure below.

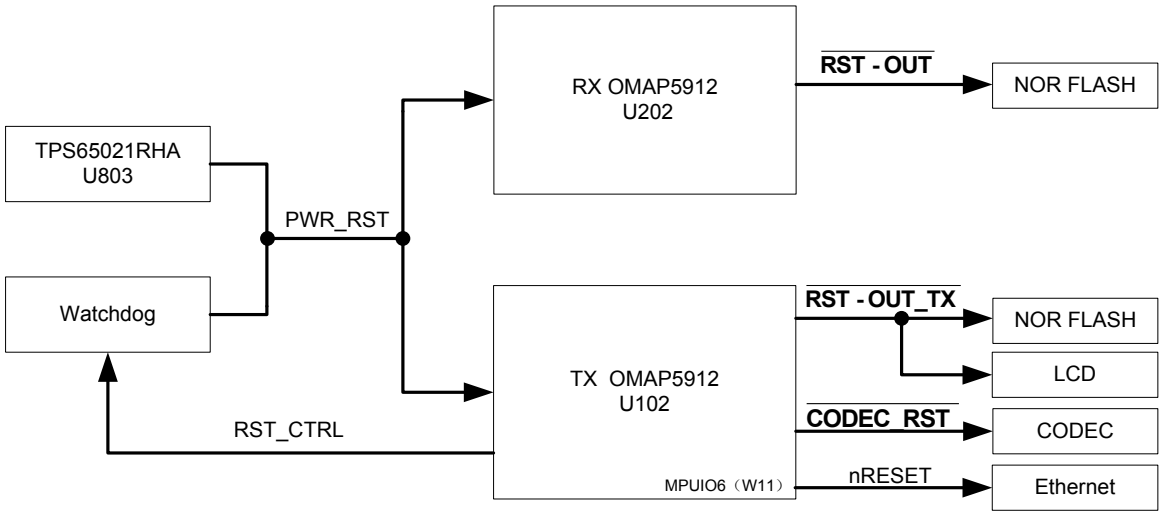


Figure 5-1 Reset Schematic Diagram

After making response to power-up reset, OMAP5912 will output $\overline{\text{RST\_OUT}}$ signal, and maintain low level for a period of time to reset the peripheral equipment (NOR Flash) of OMAP. For the CODEC chip (U501), its resetting is subject to MPUIO6 of TX OMAP. The reset sequence of OMAP5912 is shown below.

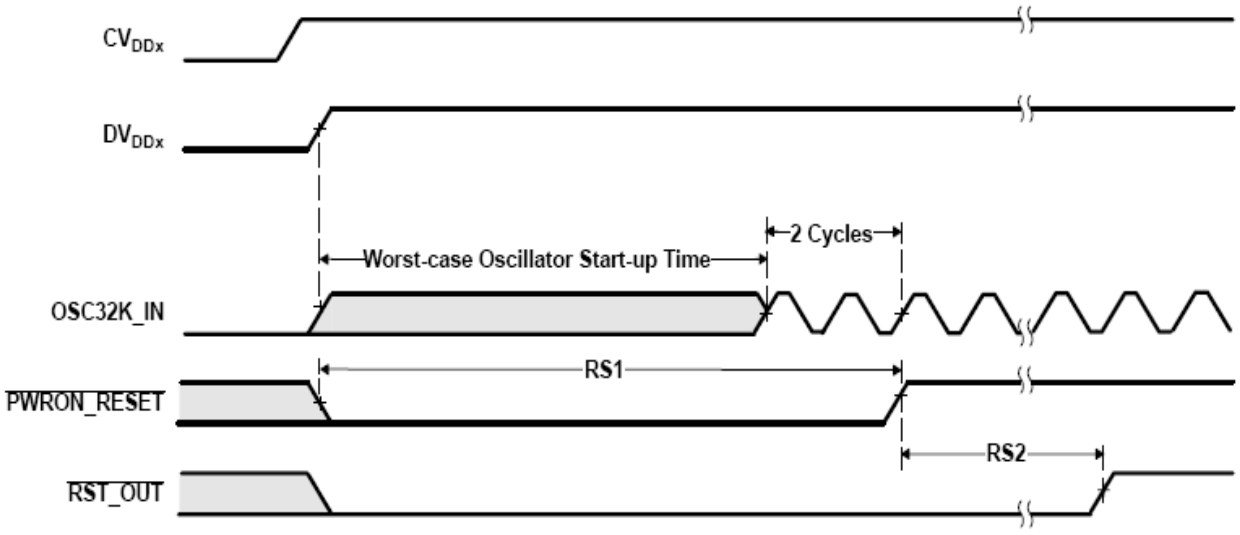


Figure 5-2 OMAP5912 Reset Sequence

Clock

OMAP5912 requires two clocks: system clock and 32K clock. The system clock is provided by the 19.2MHz TCXO, while the 32K clock is used as a special clock.

The role of ULDP (Ultra low-power device) is to manage the OMAP clock. The output clock from ULPD is connected to the appropriate external interface. OMAP is responsible for clock control, distribution, division and doubling.

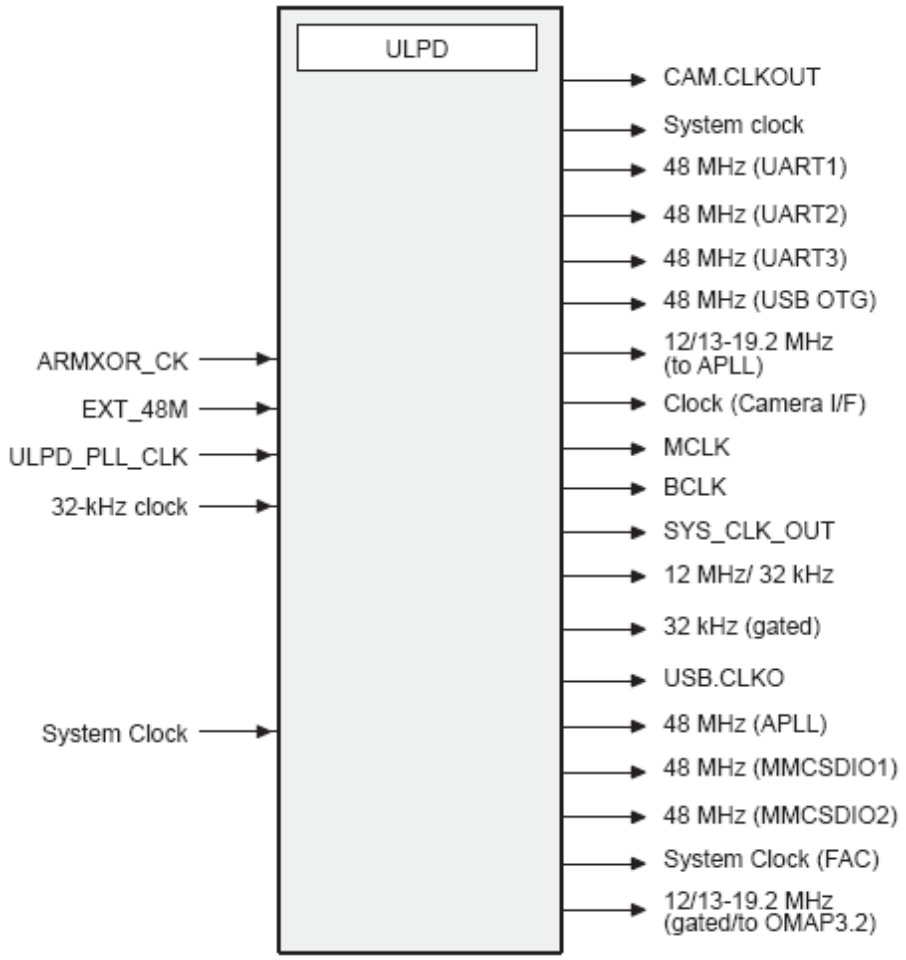


Figure 5-3 ULPD Diagram

For the built-in and external clock of OMAP2912, there are two reset modes: Reset Mode0 and Reset Mode1. Reset Mode0 is adopted for this system. As for this product, the system clock uses external clock, while the 32K clock uses built-in clock. The following diagram shows the details.

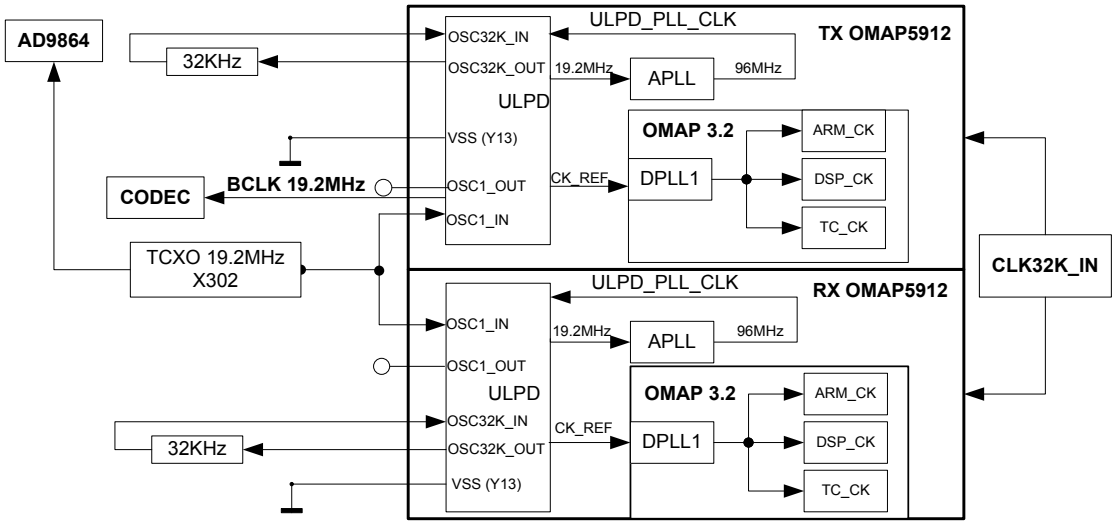


Figure 5-4 Clock Schematic Diagram

Memory

OMAP5912 provides two types of external memory interfaces: external memory interface slow (EMIFS) and external memory interface fast (EMIFF). The memory can be expanded by these two interfaces. External NOR Flash and Mobile SDRAM have been expanded for the two OMAPs in the system. Following diagram shows the details:

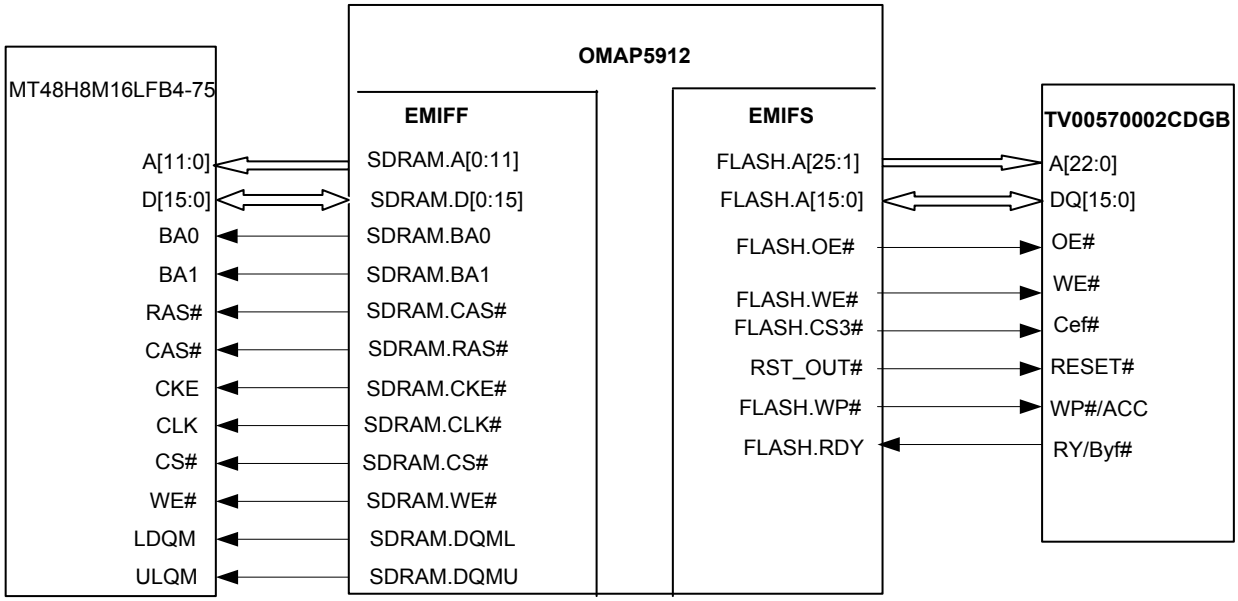


Figure 5-5 Memory Diagram

Application of OMAP

- I^2C Interface

  OMAP5912 provides one I^2C interface, and supports a communication rate of up to 400kbps. TX_OMAP I^2C Interface realizes communication with PMU. RX_OMAP I^2C module is reserved for OPTION BOARD interface. Following figure shows the connection of I^2C.

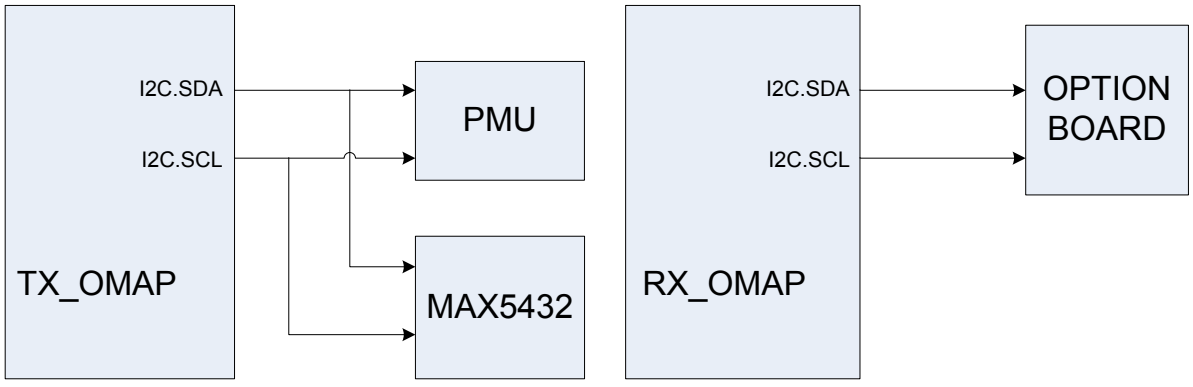


Figure 5-6 Diagram of I^2C Connection

- MCBSP Interface

With programmable internal clock generator, MCBSP uses independent clock signal and frame synchronization for transmitting and receiving to realize full-duplex data communication. OMAP5912 has three MCBSP interfaces, namely MCBSP1interface, MCBSP2 interface and MCBSP3 interface. Following figure shows the details:

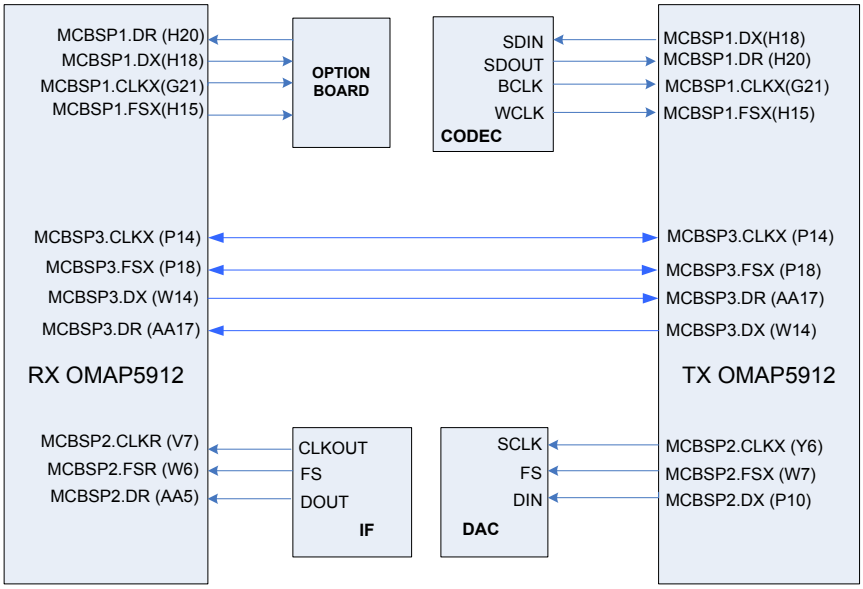


Figure 5-7 Diagram of MCBSP Interface Connection

The function of each interface is shown in the table below:

Interface Type	TX_OMAP	RX_OMAP
MCBSP1	Used to communicate with CODEC.	Reserved for option board interface.
MCBSP2	Used to connect SSI interface of TX DAC TLV5614. TLV5614 works in Slave mode and is managed by DSP.	Used to connect the SSI interface of AD9864 to receive demodulation signal from AD9864.
MCBSP3	Used to connect TX_OMAP and RX_OMAP for data exchange and transmission.	

- MCSI Interface

There are two MCSIs (Multi Channel Serial Interface) with OMAP5912.

- The MCSI1 of TX_OMAP is used by TX PLL to realize stable frequency and direct modulation.
- The MCSI1 of RX_OMAP is reserved for RX PLL to realize stable frequency and direct modulation.

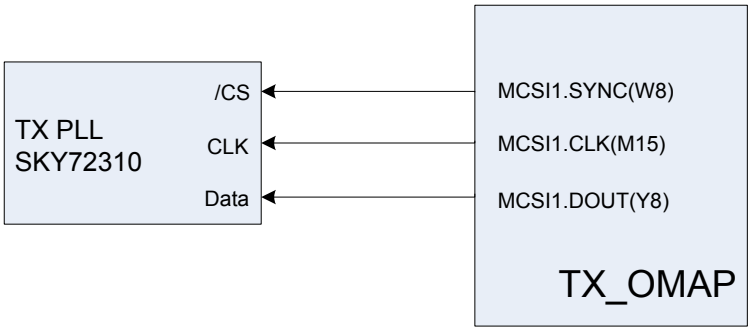


Figure 5-8 Diagram of MCSI Interface Connection

- MICROWIRE Interface

  OMAP5912 provides one MICROWIRE interface. The four chip select signals can drive four external components. The MICROWIRE interface signals include: µWIRE.CS, µWIRE.SCLK, µWIRE.SDO and µWIRE.SDI.

  For the product, only the MICROWIRE interface of TX OMAP is used to configure the internal registers of CODEC.

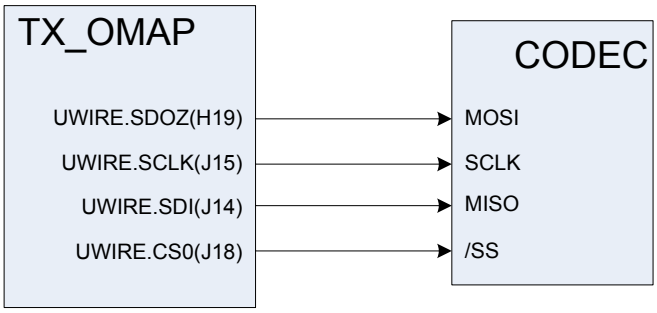


Figure 5-9 Diagram of MICROWIRE Interface Connection

- MPUIO&GPIO Interface

  OMAP5912 provides 16 MPUIOs for ARM and 64 GPIOs for ARM/DSP. Input or output function can be assigned to each GPIO/MPUIO. The interrupt input is available for the input function. Sometimes, there will be several GPIO/MPUIOs suitable for a pin. However, only one GPIO/MPUIO can be used at a time.

- SPI Interface

  SPI interface is a full-duplex four-wire interface. Devices communicate in master/slave mode, and SPI operates with individual master device and multiple slave devices. The master device controls the communications via the Shift clock signal and the enable signal of the slave devices. When the enable signal of the slave devices are valid at low level, the slave devices can receive or transmit serial signal. OMAP5912 has one SPI, which has four chip selects for connecting four external SPI components. The descriptions are as follow:

- The SPI interface of RX_OMAP is used to configure IF processor and RX PLL chip. The connection of SPI to IF processor and RX PLL is shown below.

  CS1 is used to control IF processor, which contains two data interfaces, SPI and SSI. SPI is used to configure the internal registers of IF processor and read data from the registers. SSI is used to output I/Q demodulation data and AGC data.

  CS2 is used to control RX PLL. OMAP5912 is designed as SPI Master while IF processor and RX PLL are designed as SPI Slave.

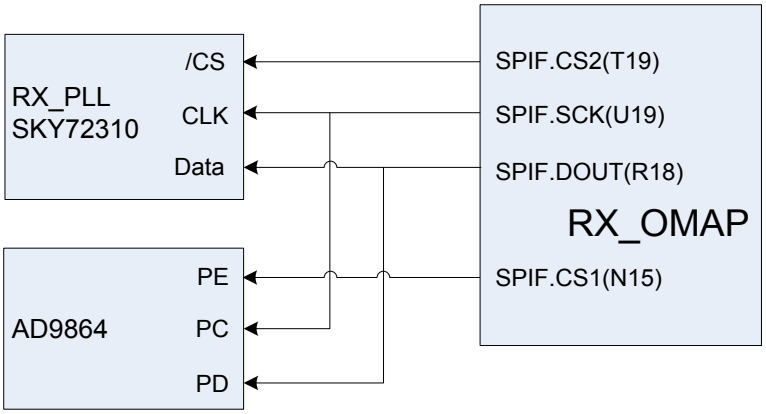


Figure 5-10 Diagram of RX_OMAP SPI Interface Connection

- The SPI interface of TX_OMAP is used to configure the RX DAC, and chip select signals is sent to CS1 of SPI. The connection of TX_OMAP SPI is shown below:

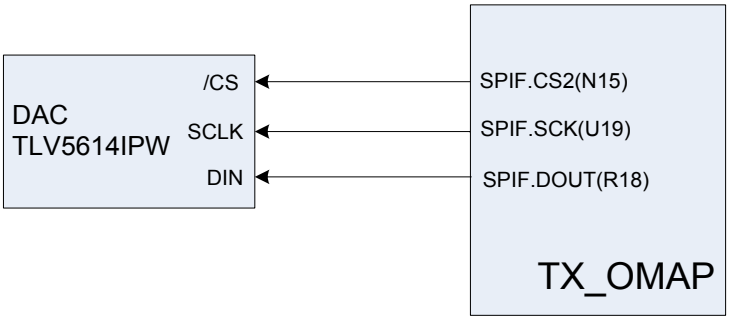


Figure 5-11 Diagram of TX_OMAP SPI Interface Connection

- UART Interface

  OMAP5912 provides three UART interfaces (UART1, UART2 and UART3), and supports hardware flow control. The maximum communication rate is 1.5Mbps.

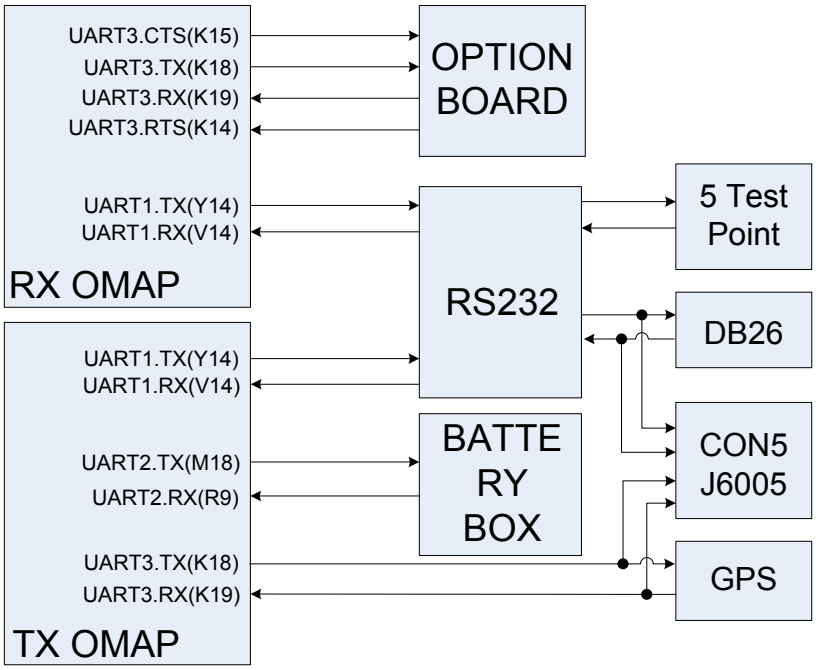
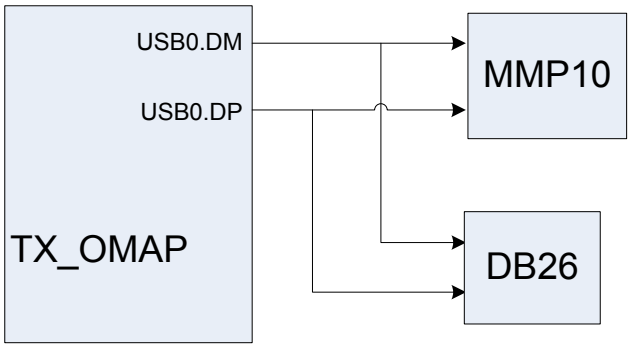


Figure 5-12 Diagram of UART Interface Connection

- USB Interface

  OMAP5912 provides three USB interfaces. Only USB0 integrating USB transceiver is used by the circuit. In compliance with USB1.1 standard, the USB can work in Host mode or Device mode with a maximum rate of 12 Mbps. The product uses the USB0 interface of TX OMAP. Following figure shows the circuit of USB0 interface:



5.2.3 Audio Module

The audio path is used to output RX audio, relay audio and input TX audio.

RX Audio Path

Via switch, TX audio signal from SPK1 and SPK2 of CODEC can be respectively output to 10PIN port and DB26 port. The way to output the TX audio signal referred above can be configured via CPS.

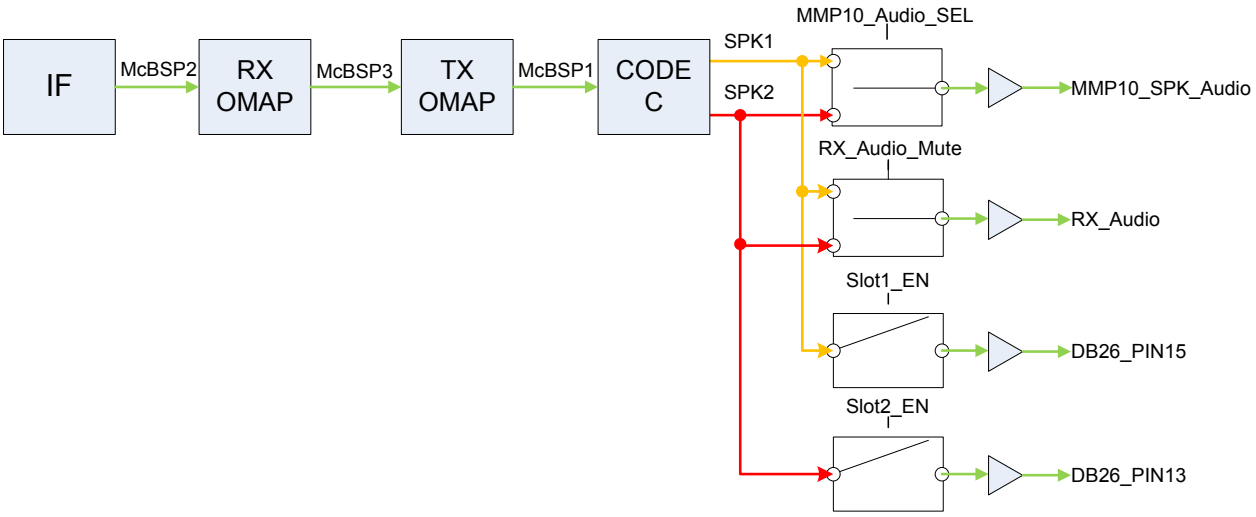


Figure 5-13 Circuit Diagram of RX Audio

Relay Audio Path

After demodulated by AD9864, relay audio in digital/analog mode goes to RX_OMAP. Then the audio is sent to TX _OMAP via McBSP3, and finally is subject to DA conversion to modulate VCO and directly modulate PLL.

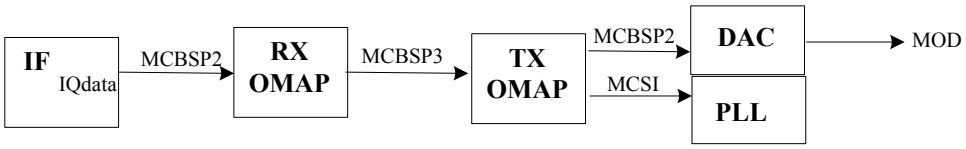


Figure 5-14 Circuit Diagram of Relay Audio

TX Audio Path

The product has two kinds of MIC audio signals: MMP10_Mic_IN and DB26_Ext_Mic_IN. MMP10_Mic_IN signal is from the accessory connected to the 10PIN interface on the front panel, while DB26_Ext_Mic_IN signal is from PIN7 of the further development interface DB26 (J7004). The EXT_MIC_CTRL signal can be configured via CPS to activate MMP10_Mic_IN or DB26_Ext_Mic_IN. Processed by CODEC, MMP10_Mic_IN or DB26_Ext_Mic_IN audio signal will be transmitted to DSP of TX_OMAP via MCBSP1 interface, and finally is subject to DA conversion to modulate PLL.

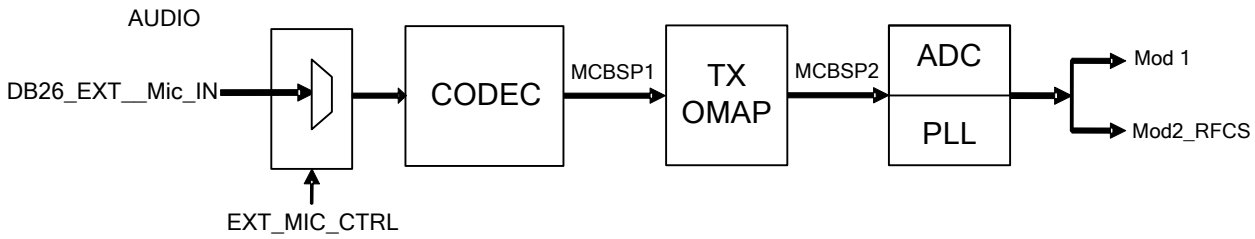


Figure 5-15 Circuit Diagram of TX Audio

5.3 RF Section

5.3.1 Transmitter Circuit

The transmitter circuit consists of a power amplifier (PA) circuit, a power control circuit, a diagnosis and detection circuit and a transmitter protection circuit.

- The power amplifier (PA) circuit is to amplify the RF signal from the exciter module to 25W. After amplification, the signal will be output via the antenna.
- The power control circuit is used to keep the RF power of the antenna at a fixed level.
- The diagnosis and detection circuit detects the current TX power, antenna VSWR and transmitter temperature, and sends the detection results to the control unit for monitoring the transmitter status.
- The protection circuit is used to protect the power amplifier from being damaged due to high temperature or VSWR.

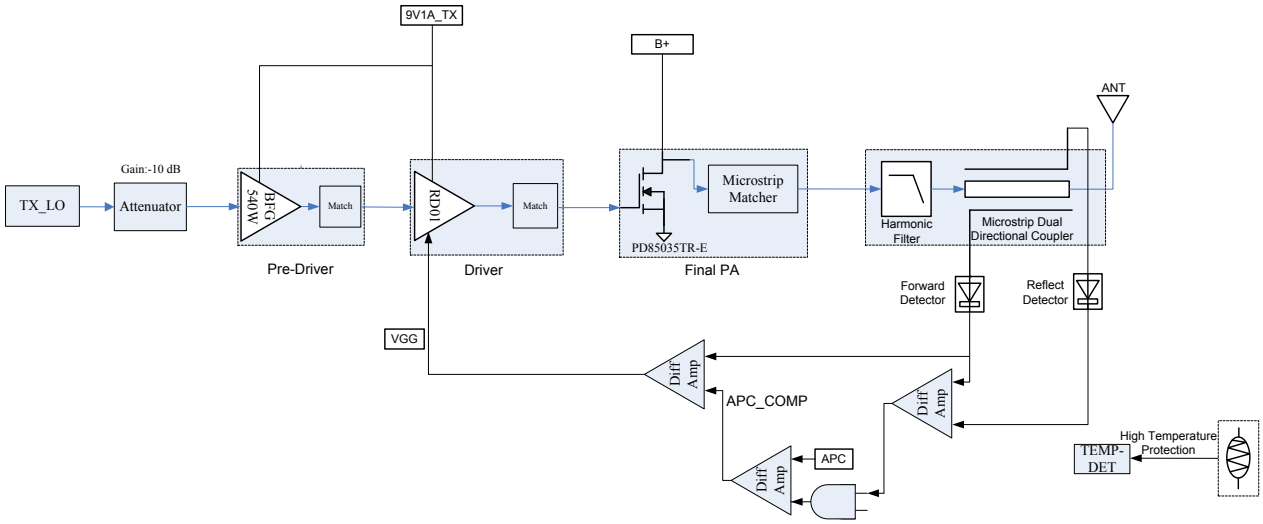


Figure 5-16 Block Diagram of PA Board

5.3.1.1 Power Amplifier

The PA circuit of transmitter is composed of a 3-stage PA unit: pre-driver stage (Q3003), driver stage (Q3002) and final stage (Q3001). The gain of Q3003 is fixed; however, the gain of Q3002 is variable under the control of APC circuit, ensuring a constant RF power output of 25W.

Pre-driver Power Amplifier

The pre-driver stage PA is an NPN transistor BFG540W (Q3003). It amplifies the RF signal from the exciter module to 17 dBm. With a fixed gain, the input/output match circuit consists of L-C low-pass matching network.

Driver Power Amplifier

The driver stage PA is an LDMOS power tube RD01 (Q3002). It further amplifies the RF signal from the pre-driver PA (Q3003) to 27 dBm. The gain of this PA is also adjustable via the output voltage (VGG) from the APC circuit.

Final Power Amplifier

The final stage PA is also an LDMOS power tube PD85015TR-E (Q3001), which is supplied by the power supply directly. The grid voltage is output from DAC, thus ensuring a fixed gain. The output match circuit of VHF consists of L-C matching network while the match circuit of UHF consists of microstrip, inductor and capacitor.

5.3.1.2 Harmonic Suppression Filter

The harmonic filter is a seven-order LPF filter comprising L3007, L3008, L3009, C3051, C3052, C3053, C3056, C3034, C3035 and C3150. It can decrease the harmonic component by increasing the out-of-band rejection capability.

5.3.1.3 Directional Coupler

The directional coupler is used to detect forward and reverse power, so as to monitor and diagnose the operating status of the transmitter. There are two purposes: 1) power can be controlled effectively through the forward detection; 2) the voltage after forward and reverse detection will be sent to U3002 for VSWR detection.

5.3.1.4 Power Control

The transmitter power is controlled by the power control circuit composed of an operational amplifier and a directional coupler. After the transmitter power passes through the directional coupler, the detected RF signal goes to Port 3 of the operational amplifier (AD8566) via the diode. After compared with APC_COMP, an error voltage (VGG) is output to control the bias voltage at RD01, and thus to achieve power control.

5.3.1.5 Temperature Protection

The temperature protection aims to detect the PCB temperature through the temperature sensor resistor which locates near the final-stage PA. When the temperature rises to the threshold value (85℃), the voltage generated by U3003 turns the diode D8014 on. After this voltage is detected, the APC output and VGG become decreased, and thus the output power is lowered. At the meantime, a high-temperature alarm appears on the LCD.

5.3.1.6 VSWR Protection

After the forward and reverse detection via directional coupler, the power is converted to voltage, which

goes to U3002 for VSWR detection. When VSWR>2:1, a voltage is output to turn the diode D3004 on, and sent for comparison with APC reference voltage provided by MCU to generate APC_COMP. Then APC_COMP is compared with forward detection voltage, so as to reduce the output voltage (VGG) and achieve VSWR protection.

5.3.2 Receiver Circuit

The receiver circuit mainly comprises the RF band-pass filter, low-noise amplifier, mixer, IF filter, IF amplifier and IF processor.

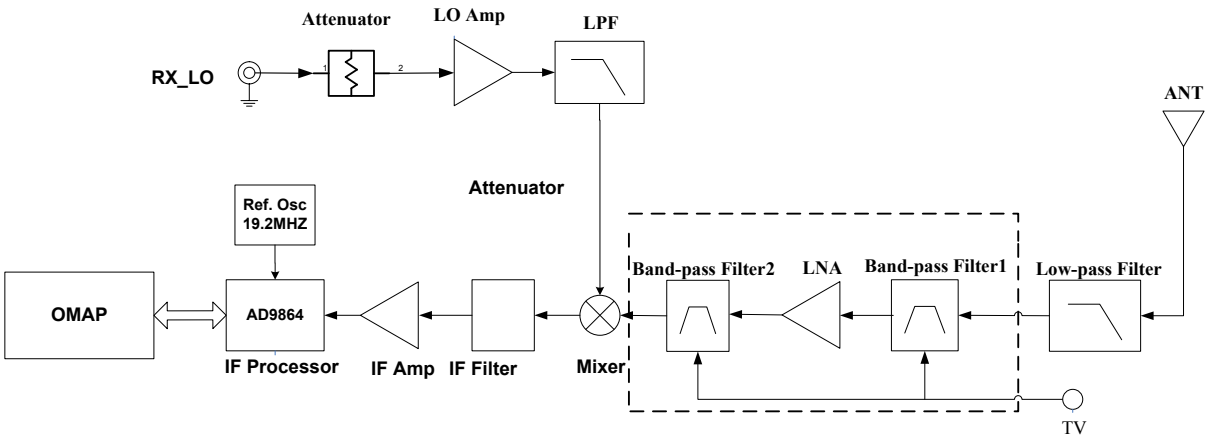


Figure 5-17 Diagram of Receiver Circuit

Receiver Front-end

The HF signal from the low-pass filter passes through the electrically tunable first-stage band-pass filter controlled via TV level, to remove out-of-band interference signal and to send wanted band-pass signal to the low-noise amplifier (Q4002). The amplified signal goes to a band-pass filter controlled via TV level, to remove out-of-band interference signal generated during amplification, and to send wanted HF signal to the mixer.

The wanted signal passes through the RF band-pass filter and low-noise amplifier and goes to the mixer (D4007). Meanwhile, the first local oscillator (LO) signal generated by VCO passes through the low-pass filter and also goes to the mixer (D4007). In the mixer, the wanted signal and the first LO signal are mixed to generate the first IF signal (73.35MHz for UHF and 44.85MHz for VHF). Then the signal passes through the frequency selection network composed of LC, to suppress carriers other than the first IF signal, and to increase the isolation between the mixer and the IF filter. After that, the first IF signal is processed by the crystal filter (Z4001), and is sent to the two-stage IF amplifier circuit for amplification. Then the amplified signal goes to the IF processor AD9864 (U5001) for processing.

Receiver Back-end

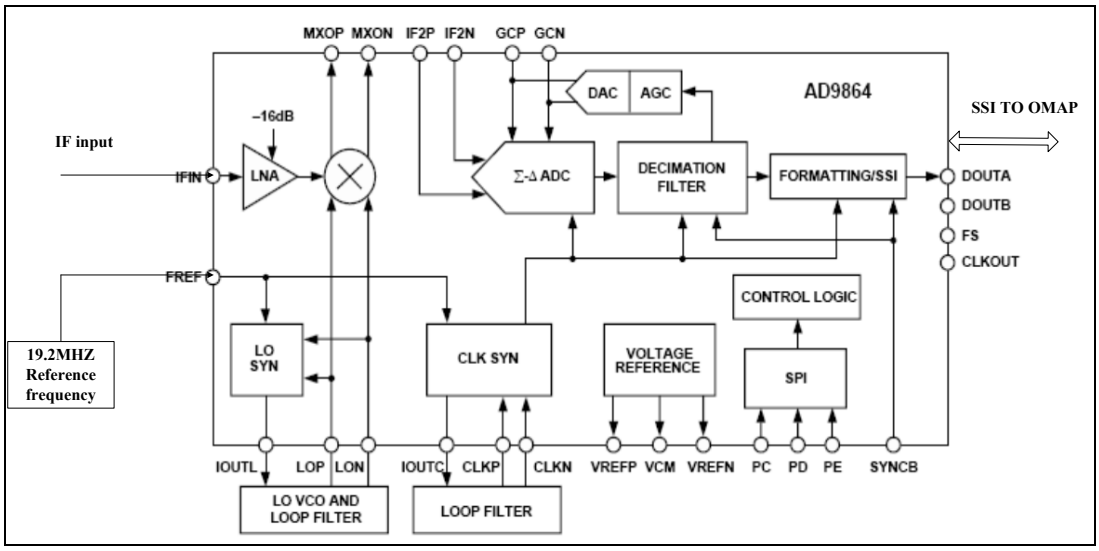


Figure 5-18 Diagram of IF Processor

The first IF signal (58.05MHz) output by the IF amplifier goes into AD9864 (U5001) via Pin 47, where it is down-converted to a second IF signal (2.25MHz). Then the second IF signal is converted to a digital signal via ADC sampling, and output via the SSI interface. Finally, the digital signal is sent to the DSP (OMAP5912) for demodulation.

AD9864 employs reference frequency of 19.2MHz and shares the crystal with the OMAP. The second LO VCO is comprised of an oscillator, a varactor and some other components, to provide the 71.1/75.6 MHz LO signal for UHF and 47.1/42.6 MHz LO signal for VHF. The 18 MHz clock frequency is generated by the LC resonance loop.

5.3.3 Frequency Generation Unit (FGU)

The transceiver has two FGUs: RX FGU and TX FGU. The RX FGU provides the first LO frequency for the RX system, while the TX FGU provides carrier and excitation signal for the TX system. They work simultaneously, but are locked at different frequencies.

Both the RX FGU and TX FGU mainly consist of a reference crystal oscillator, a PLL, a VCO and a buffer amplifier. The PLL data is configured via OMAP. The TX FGU further comprises a modulation circuit (MOD_H). See the figure below.

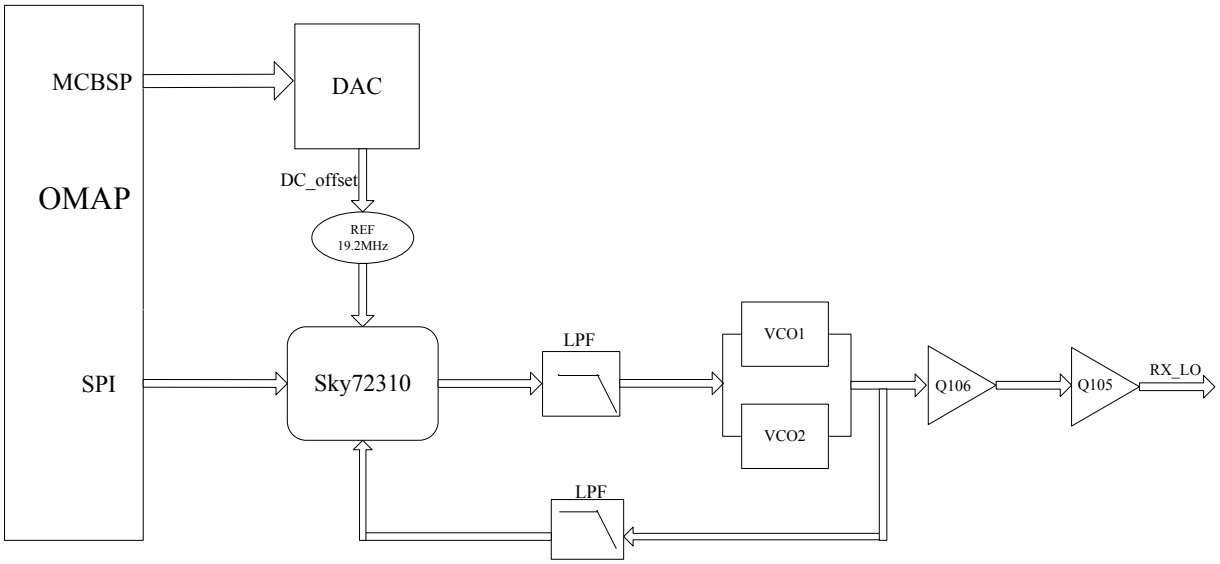


Figure 5-19 Block Diagram of RX FGU

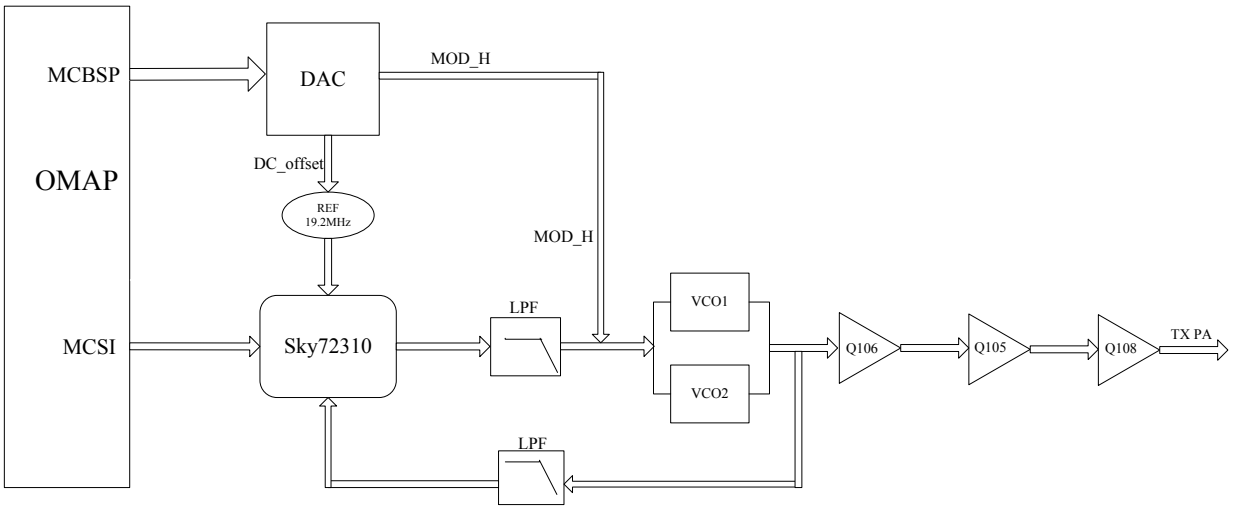


Figure 5-20 Block Diagram of TX FGU

Reference Crystal Oscillator

The reference crystal oscillator is a temperature compensated crystal oscillator with a frequency of 19.2 MHz. You can control the reference crystal oscillator by adjusting the DC voltage output by the digital-to-analog converter (DAC), so as to ensure frequency accuracy.

PLL IC

The PLL IC is a fractional frequency divider (Sky72310), which consists of the pre-divider, programmable divider, phase detector, charge pump, SPI (MCSI) control interface and etc. The voltage for the analog circuit and digital circuit of the PLL IC is 3.3 V, while the voltage for the charge pump is 5 V. See the figure below.

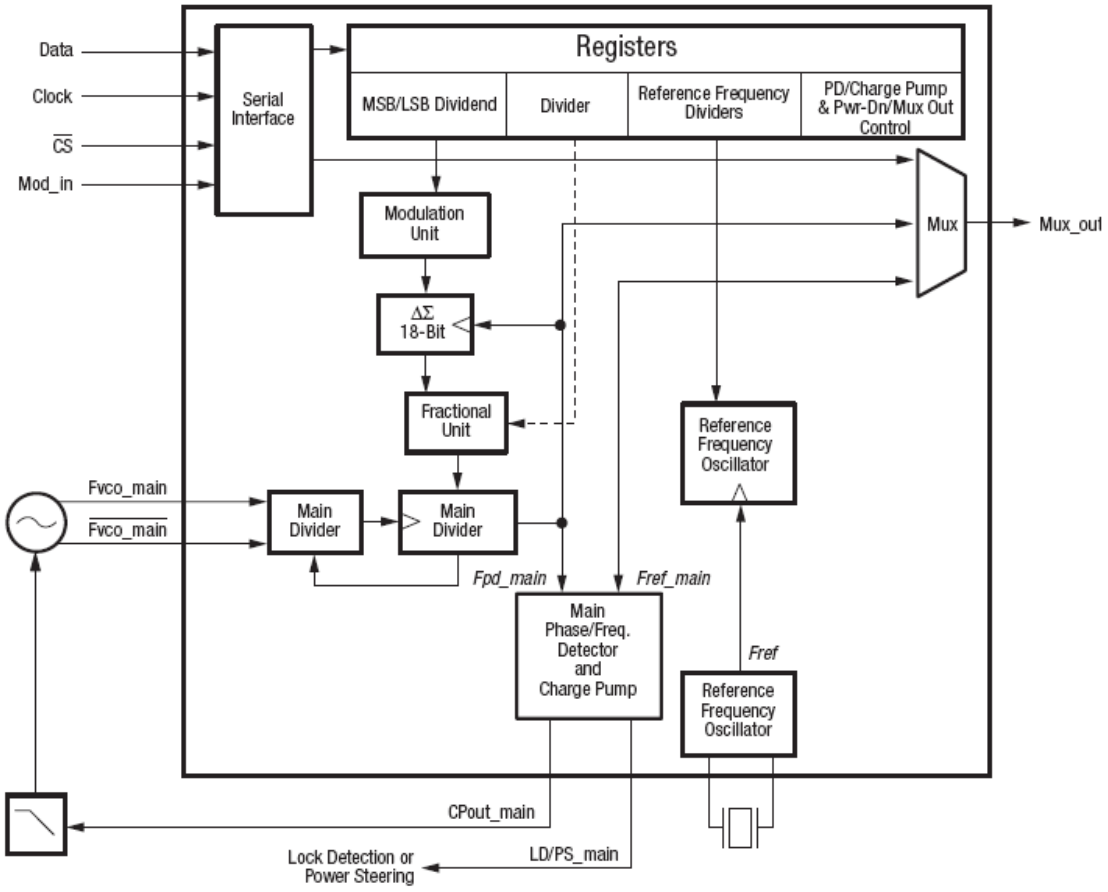


Figure 5-21 Block Diagram of PLL IC

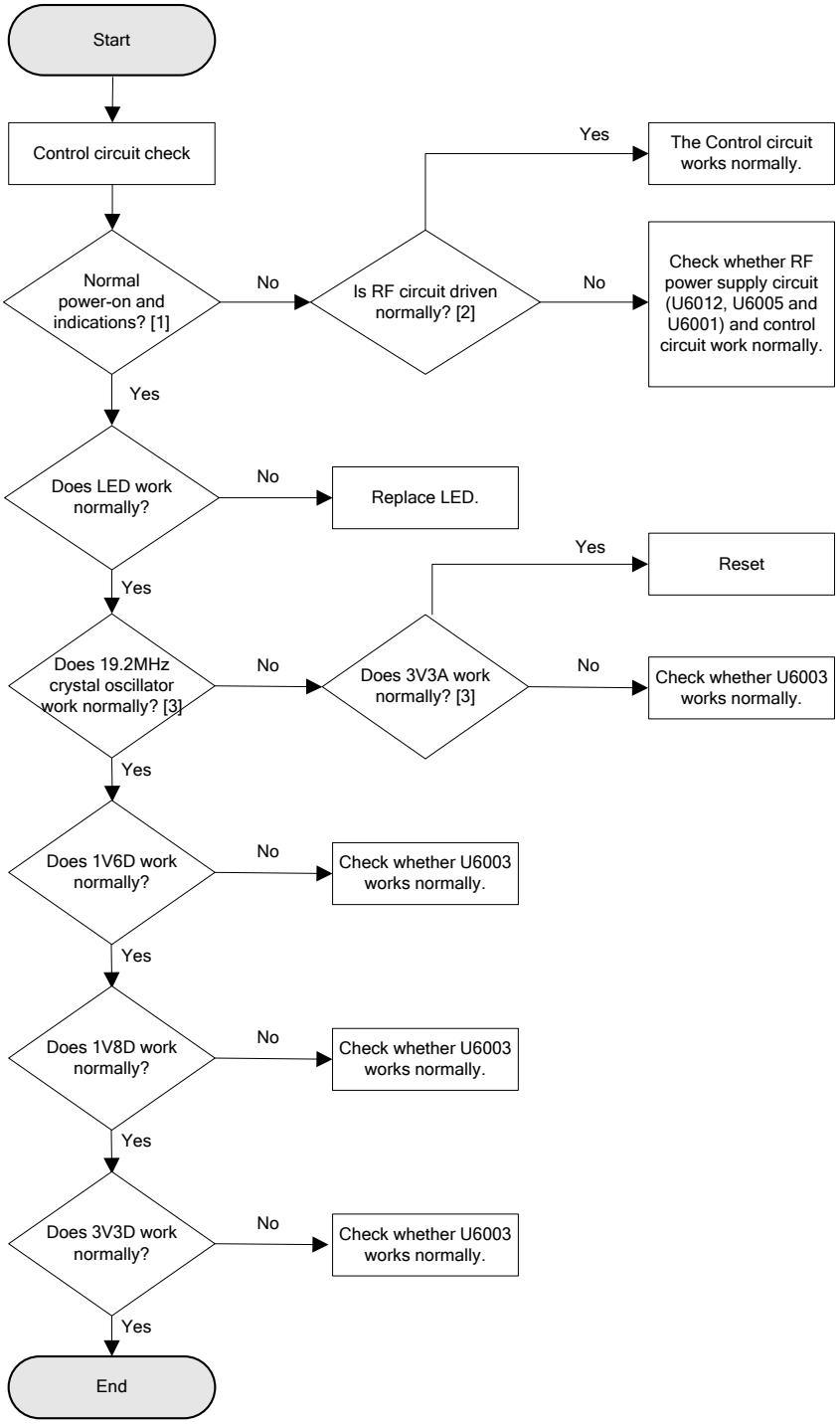
Sky72310 is mainly used to generate an accurate frequency according to data transmitted from the baseband OMAP. The 19.2 MHz frequency generated by reference crystal oscillator goes into PLL IC where it is divided to generate a reference frequency. The frequency generated by VCO goes into PLL IC where it is divided to generate a frequency. The generated frequency is compared with the reference frequency in the phase detector (PD) and converted into a DC level CV voltage, so as to control and adjust the output frequency of VCO, thus locking the frequency. Moreover, the PLL IC is also an important part of the modulation circuit. The MCSI interface of OMAP transfers data to PLL IC directly to perform modulation.

VCO

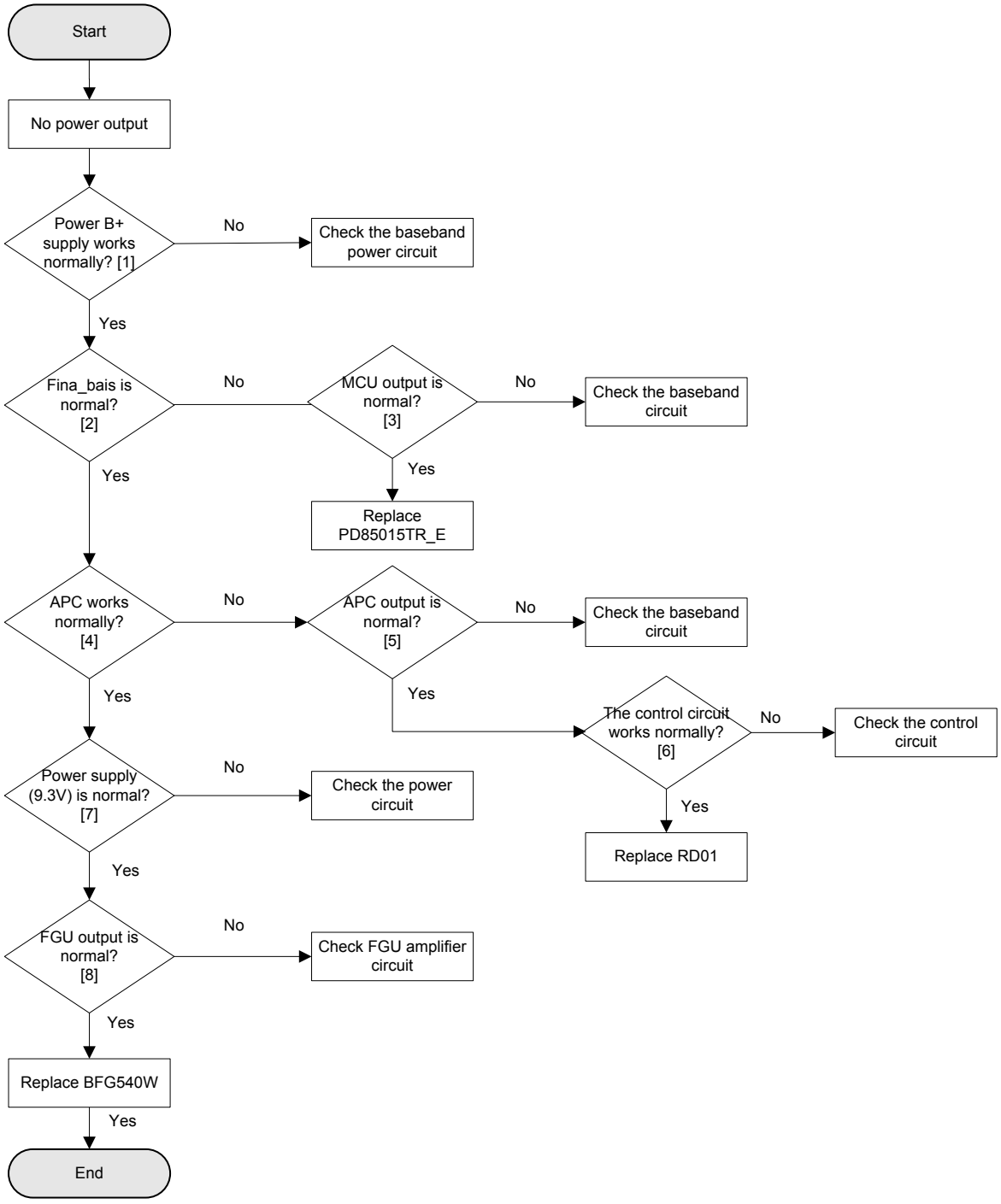
- The VCO for RX unit is comprised of a transistor (Q2011 or Q2014), varactors and four Colpitts oscillator circuits. Q2012 is the buffer amplifier of RX unit.
- The VCO for TX unit is comprised of a transistor (Q2003 or Q2007), varactors and four Colpitts oscillator circuits. Q2005 is the buffer amplifier of TX unit.

6. Troubleshooting Flow Chart

6.1 Control Circuit



6.2 Transmitter Circuit

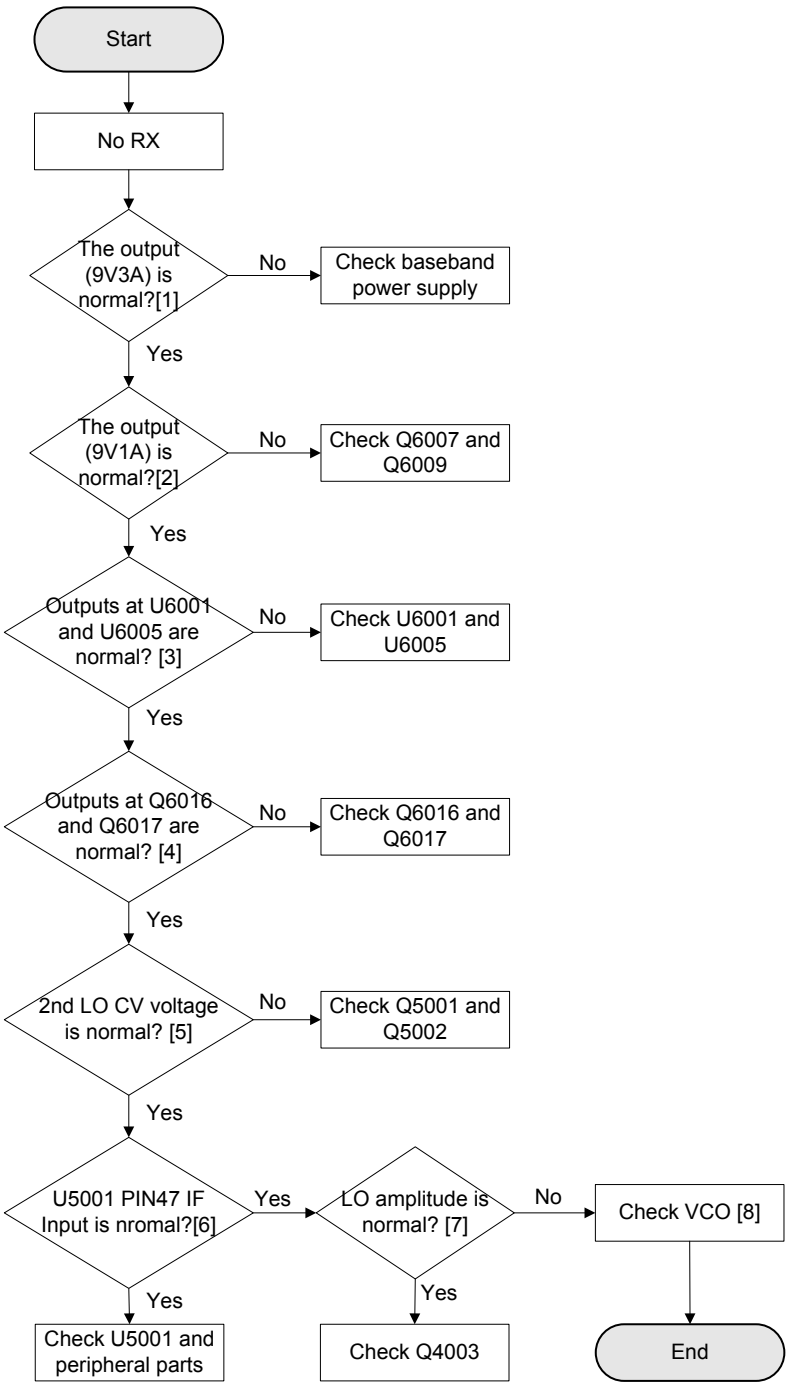


Description of Normal Situations:

- [1] Check whether the power supply for the final-stage power amplifier is 13.6 V if the PA does not output power.
- [2] The normal Fina_bais voltage is 3 V. If there is no Fina_bais voltage in the event of high power, check whether the MCU output is normal.

- [3] If there is no MCU output, check whether the baseband circuit is normal. If yes, it indicates that the baseband does not output the bias voltage and the amplifier is damaged. In this case, please replace PD85015TR_E.
- [4] When the PA works normally, the APC voltage is used to control the bias voltage of RD01. The voltage is about 2.8 V in the event of high power.
- [5] The baseband can provide an APC reference voltage under the normal condition.
- [6] The baseband circuit provides the APC reference voltage. The difference between the APC reference voltage and the forward voltage is amplified by the control circuit to generate the error voltage VGG, to control the gain of RD01. If the VGG voltage is available, it indicates that RD01 is damaged and need to be replaced. If there is no VGG voltage, please check the control circuit.
- [7] Check whether the power supply (9.3 V) that supplies the RD01 and BFG540W is normal.
- [8] Under the normal condition, the FGU outputs signal (10 to 12 dBm). If not, check the FGU amplifier circuit. If yes, the amplifier BFG540W may be damaged. In this case, replace it.

6.3 Receiver Circuit

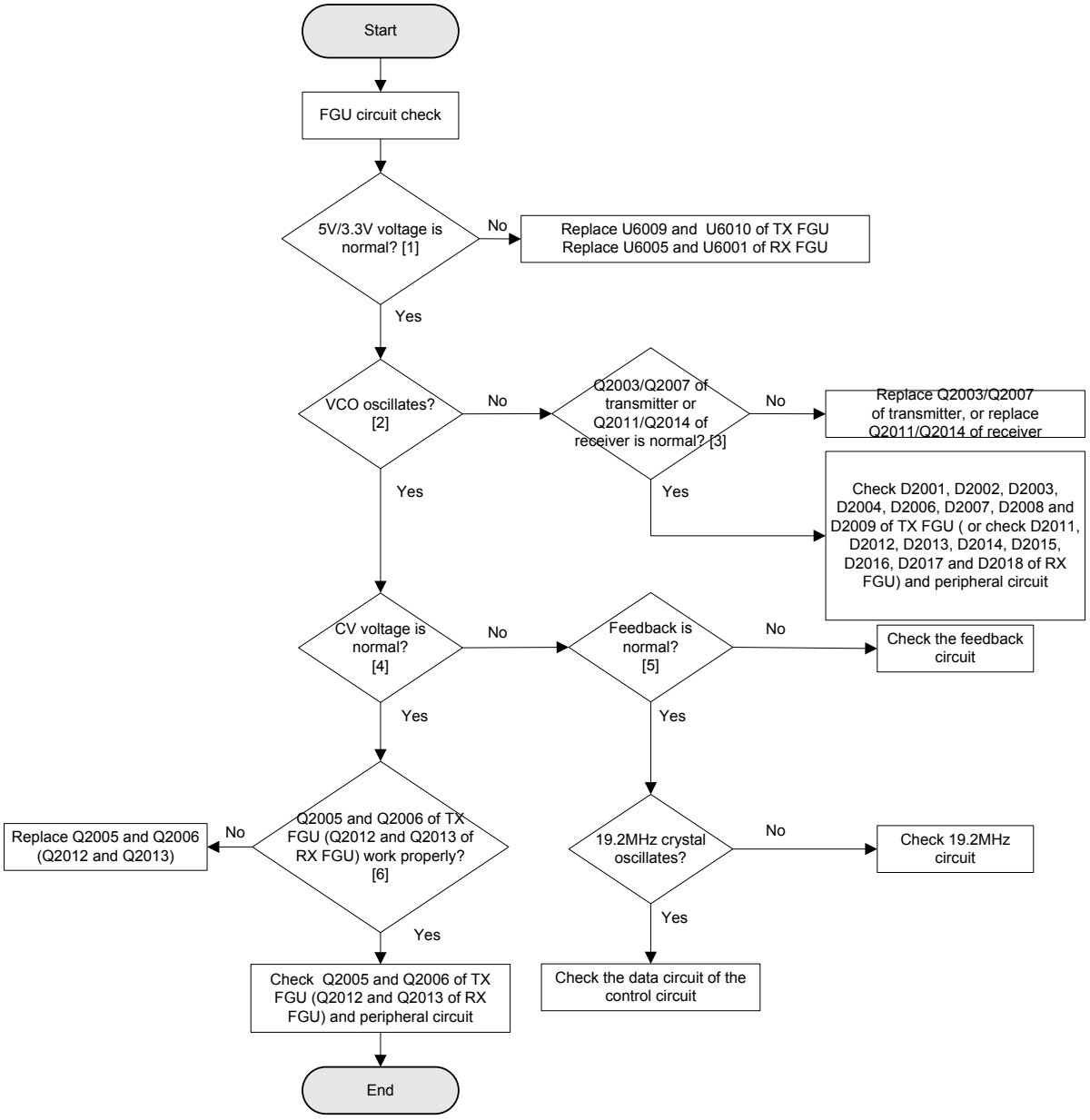


Description of Normal Situations:

- [1] The power supply for RX board is about 9.3 V.
- [2] Voltage at Pin 2 of Q6007 is about 9.1 V, and voltage at Pin 2 of Q6016 is about 5 V.
- [3] Output voltage at Pin 5 of U6001 is about 3.3 V, and output voltage at Pin 5 of U6005 is about 5 V.
- [4] The normal second LO CV voltage tested at TP5004 is 0.8 to 1.3V.

- [5] Cut off the front-end circuit, and input an IF signal (73.35 MHz for UHF and 44.85 MHz for VHF) from Pin 47 of U5001. The sensitivity is about -107 dBm.
- [6] The first LO signal amplitude is 17 to 20 dBm.

6.4 FGU Circuit



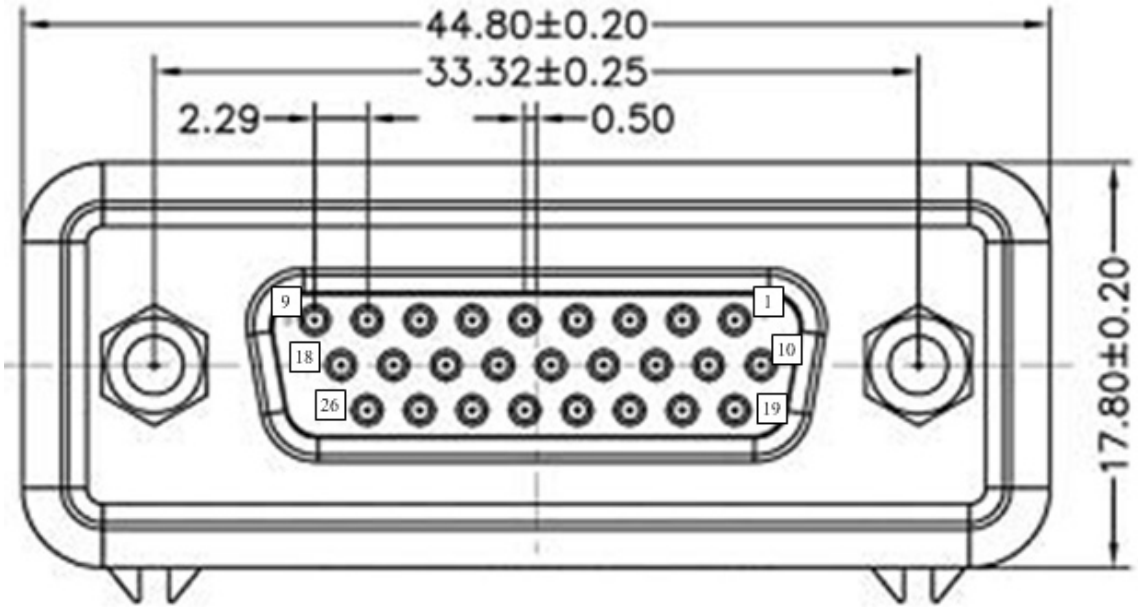
Description of Normal Situations:

- [1] The power supply for the VCO and PLL is 5 V and 3.3 V respectively.

- [2] At the transmitting end, frequency output for low VCO is 136 to 154.9875 MHz, and for high VCO is 155 to 174 MHz; at the receiving end, frequency output for low VCO is 180.85 to 199.8375MHz, and for high VCO is 199.85 to 218.85 MHz. The power output for these four VCOs is -8 to 8 dBm.
- [3] The voltage at the collector of Q2003, Q2007, Q2011 and Q2014 is about 4 V; the difference between the base voltage and emitter voltage is about 0.6 V.
- [4] The normal CV voltage is 0.6 to 4.4 V.
- [5] The feedback amplitude from the VCO to the PLL is from -17 to -8 dBm.
- [6] The voltage at the collector of Q2005 and Q2012 is about 6 V; the difference between the base voltage and emitter voltage is about 0.6 V.

7. Interface Definition

7.1 26PIN MAP Interface on Front Panel



The DB26 (ACCY CONN) interface serves as the further development interface on the front panel. The definition of each pin is described as below:

Pin	Name	Type (For repeater)	Electrical Performance	Description
1	RS232_TOUT	Digital output	RS232 level signal	RS232 serial data output
2	GND	Ground (digital)	-	-
3	DB26_GPIO4	GPIO	5V TTL	GPIO. The function is subject to CPS settings.
4	SWB+	Power output	13.2V±15%; output current ≤1A	-
5	NC	-	-	-
6	MIC_GND	Ground (analog)	-	-

Pin	Name	Type (For repeater)	Electrical Performance	Description
7	Tx Audio	Analog signal input	Vrms=80mV±10%@1KHz 60% system max. deviation DC=9.3 V	External MIC signal input. The function is subject to CPS settings.
8	RX Audio	Analog signal output	Load impedance>1KΩ Vrms=800mV±10%@1KHz 60% system max. deviation	RX filter/flat audio output. The audio output type is subject to CPS settings.
9	GND	Ground (analog)	-	-
10	D+	USB0 data cable+	USB data	When this pin is used for USB, USB of MMP10 will be disabled.
11	GND	Ground (digital)	-	-
12	DB26_GPIO2	GPIO	5V TTL	GPIO. The function is subject to CPS settings.
13	ACC_IO2	Digital input	5V TTL	Accessory identification interface. The function is reserved.
14	PROM IN	Digital input	5V TTL	Not defined
15	ACC_IO3	Digital input	5V TTL	Accessory identification interface. The function is reserved.
16	DB26_PTT_IN	Digital input	5V TTL	Programmable input pin (**PTT** key by default) valid for low level; configurable via CPS.
17	GND	Ground (digital)	-	-

Pin	Name	Type (For repeater)	Electrical Performance	Description
18	RS232_RIN	Digital signal input	RS232 level signal	RS232 serial data input
19	D-	USB0 data cable-	USB data	When this pin is used for USB, USB of MMP10 will be disabled.
20	DB26_GPIO3	Digital input/output	5V TTL	GPIO. The function is subject to CPS settings.
21	GND	Ground (digital)	-	-
22	DB26_GPIO5	Digital input/output	5V TTL	GPIO. The function is subject to CPS settings.
23	DB26_GPIO6	Digital input	5V TTL	General input interface. The function is subject to CPS settings.
24	SlotA_Audio	Analog output	Load impedance>1KΩ Vrms=800mV±10%@1KHz 60% system max. deviation	1. Audio output of RX Slot A; 2. Select digital mode via CPS
25	SlotB_Audio	Analog output	Load impedance>1KΩ Vrms=800mV±10%@1KHz 60% system max. deviation	1. Audio output of RX Slot B; 2. Select digital mode via CPS
26	RSSI	Analog output	0 to 5V DC	RSSI indication output. The function is reserved.

7.2 RJ45 (female) Interface on Front Panel

RJ45 (ETHERNET), a TCP/IP interface, is used to realize many functions such as Remote Monitor. The definition of each pin is described as below:

Pin	Type (For repeater)	Electrical Performance	Description

Pin	Type (For repeater)	Electrical Performance	Description
1	TX data+	-	-
2	TX data-	-	-
3	RX data+	-	-
6	RX data-	-	-
4, 5, 7, 8	NC	-	-

7.3 TX/ANT Interface on Rear Panel

TX/ANT interface is an N type female interface for TX antenna connection. The definition of each pin is described as below:

Pin	Type (For repeater)	Electrical Performance	Description
1	TX or antenna interface	Output/RX or TX of antenna signal	Impedance: 50 Ω

7.4 RX Interface on Rear Panel

RX interface is an N type female interface for TX antenna connection. The definition of each pin is described as below:

Pin	Type (For repeater)	Electrical Performance	Description
1	RX interface	Input	Impedance: 50 Ω

7.5 AC Power Supply Interface on Rear Panel

AC power supply interface is a 3PIN interface. The definition of each pin is described as below:

Pin	Type (For repeater)	Electrical Performance	Description
1	L (Live wire)	Input	Max input voltage range: 90 to 240 V.
2	N (Neutral wire)	-	-
3	E (Earth wire)	-	-

7.6 Battery Interface on Rear Panel

Battery interface is a 2Pin interface. The definition of each pin is described as below:

Pin	Type (For repeater)	Electrical Performance	Description
1	Power supply	Input/output	When there is no AC power supply, this pin is for lead-acid battery input; When there is AC power supply, this pin is used to output a voltage of 13.2V±1% to charge the battery.
2	Ground (power supply)	-	-

7.7 Interfaces Located between Internal Front Panel and Main Board

Pin	Type (For repeater)	Electrical Performance	Description
1	Power LED Indicator	1.9V±1%	Indicates that the operating voltage is normal.
2	Digital Channel LED Indicator	2.9V ±1%	Indicates that the repeater works on digital channel.
3	Analog Channel LED Indicator	2V±1%	Indicates that the repeater works on analog channel.
4	Slot A TX LED Indicator	1.9V±1%	Indicates that the repeater transmits in Slot A.
5	Slot A RX LED Indicator	2.9V±1%	Indicates that the repeater receives in Slot A.
6	Slot B TX LED Indicator	1.9V±1%	Indicates that the repeater transmits in Slot B.
7	Slot B RX LED	2.9V±1%	Indicates that the repeater

Pin	Type (For repeater)	Electrical Performance	Description
	Indicator		receives in Slot B.
8	Alarm LED Indicator	1.9V±1%	The Alarm LED indicator will glow when the following situations occur: abnormal VSWR, operating voltage being too high or too low, operating temperature being too high, TX Unlock, RX Unlock, fan failure, abnormal forward power, etc.
9	Power Supply	5V	Operating voltage of front panel.
10	Ground (analog)	Ground (analog)	Ground (analog)

8. Tuning Description

8.1 Required Test Instruments

- Radio test sets: Aeroflex 3920 and HP8921
- 3A/10V power supply
- Multimeter
- Tuner software

8.2 Tuning Process

8.2.1 Tuning a Repeater

After the repeater is reassembled, it must be tuned via the Tuner software.

The specific operations are described in the table below.

Items	Method
TX Section	
Reference Oscillator Warp	1. Connect the antenna connector of the repeater to HP8921, and set HP8921 to TX test mode. 2. Open the Tuner software, go to “TUNE_DATA -> TX” and double click “Reference Oscillator Warp” from the navigation tree on the left. Then click the “Transmit On” button. 3. Observe the frequency displayed on HP8921, and adjust the vernier until the frequency offset is less than or equal to 40Hz. 4. Click the “Transmit Off” button. 5. Click the “Save” button to save your settings.
Transmit Power Calibration	1. Connect the antenna connector of the radio with HP8921, and set HP8921 to TX test mode. 2. Open the Tuner software, go to “TUNE_DATA -> TX” and double click “Transmit Power Calibration” from the navigation tree on the left. Then select an appropriate channel. 3. Click the “Transmit On” button. 4. Adjust the power to the required level as described below:

Items	Method
	L：1.2±0.1W H：25±0.5W 5. Click the “Save” button to save your settings.
Transmit-to-Deviation	1. Connect the antenna connector of the repeater to HP8921, and set HP8921 to TX test mode. 2. Set the HP8921 parameters as follows: IF Filter：230kHz Filter1：<20Hz HPF Filter2：<15kHz LPF De-Emphasis：OFF 3. Open the Tuner software, go to “TUNE_DATA -> TX” and double click “Transmit-to-Deviation” from the navigation tree on the left. Then click the “Transmit On” button. 4. Observe the frequency deviation displayed on HP8921, and adjust the vernier on Tuner until the frequency deviation is 5k±50Hz. 5. Click the “Transmit Off” button. 6. Click the “Save” button to save your settings.
Modulation Balance	1. Connect the antenna connector of the repeater with HP8921, and set HP8921 to TX test mode. 2. Set the HP8921 parameters as follows: IF Filter: 230 kHz Filter1: <20 Hz HPF Filter2: <15 kHz LPF De-Emphasis: OFF 3. Open the Tuner software, go to “TUNER_DATA -> TX” and double click “Modulation Balance” from the navigation tree on the left. Then select an appropriate channel. 4. Click the “Transmit On” button. 5. Adjust the value in the dialog box until the frequency deviation displayed

Items	Method
	on HP8921 is 5k±50Hz. 6. Press the Enter key on the keyboard to confirm your settings if the value is input via the keyboard. If the value is adjusted via the vernier, skip this step. 7. Click the “Transmit Off” button. 8. Click the “Save” button to save your settings.
RX Section	
Front-end Filter	1. Connect the antenna connector of the repeater to HP8921. 2. Connect the Audio Out port of the repeater with the Audio In port of HP8921, and set HP8921 to RX test mode. 3. Set the HP8921 parameters as follows: Output RF signal: -118 dBm/Frequency (current channel frequency) Modulation frequency: 1 KHz Modulation deviation: 3 KHz De-Emphasis：750 us 4. Observe the value displayed on the HP8921 and adjust the vernier until the SINAD value is more than 14 dB. 5. Set the HP8921 parameters as follows: Output RF signal: -25 Bm/(current channel frequency: -36.675 MHz) 6. Observe the value displayed on the HP8921 and adjust the vernier until the SINAD value is less than 14dB. 7. Press the **Enter** key on the keyboard to confirm your settings if the value is input via the keyboard. If the value is adjusted via the vernier, skip this step. 8. Click the “Save” button to save your settings.
Front-end Gain	1. Connect the antenna connector of the repeater to HP8921, and set HP8921 to RX test mode. 2. Set the HP8921 to output -70dBm/Frequency (current channel frequency) unmodulated RF signal.

Items	Method
	3. Press the **Enter** key on the keyboard to confirm your settings if the value is input via the keyboard. If the value is adjusted via the vernier, skip this step. 4. Click the “Save” button to save your settings.

8.2.2 Test a Repeater

After tuning the repeater, it is required to test the digital RF signal.

Transmitting

Step 1 Open the Tuner software and go to “TEST -> TX”, and double click “Transmit BER (0.153)” from the navigation tree on the left to open Transmit BER (0.153) interface.

Step 2 Select the frequency to be tested.

Step 3 Click the “Transmit On” button.

Step 4 Set the Aeroflex 3920 as follows:

- Freq: Be consistent with the frequency to be tested.
- STD IB 511(.153)
- View all items on the Aeroflex 3920.
- Frequency Error ≤ 100 Hz
- Transmit Power: 1 W
- FSK Error ≤ 5%
- Magnitude Error ≤ 1%

Receiving

Step 1 Open the Tuner software and go to “TEST -> RX”, and double click “Receiver BER (0.153)” from the navigation tree on the left to open Receiver BER (0.153) interface.

Step 2 Select the frequency to be tested.

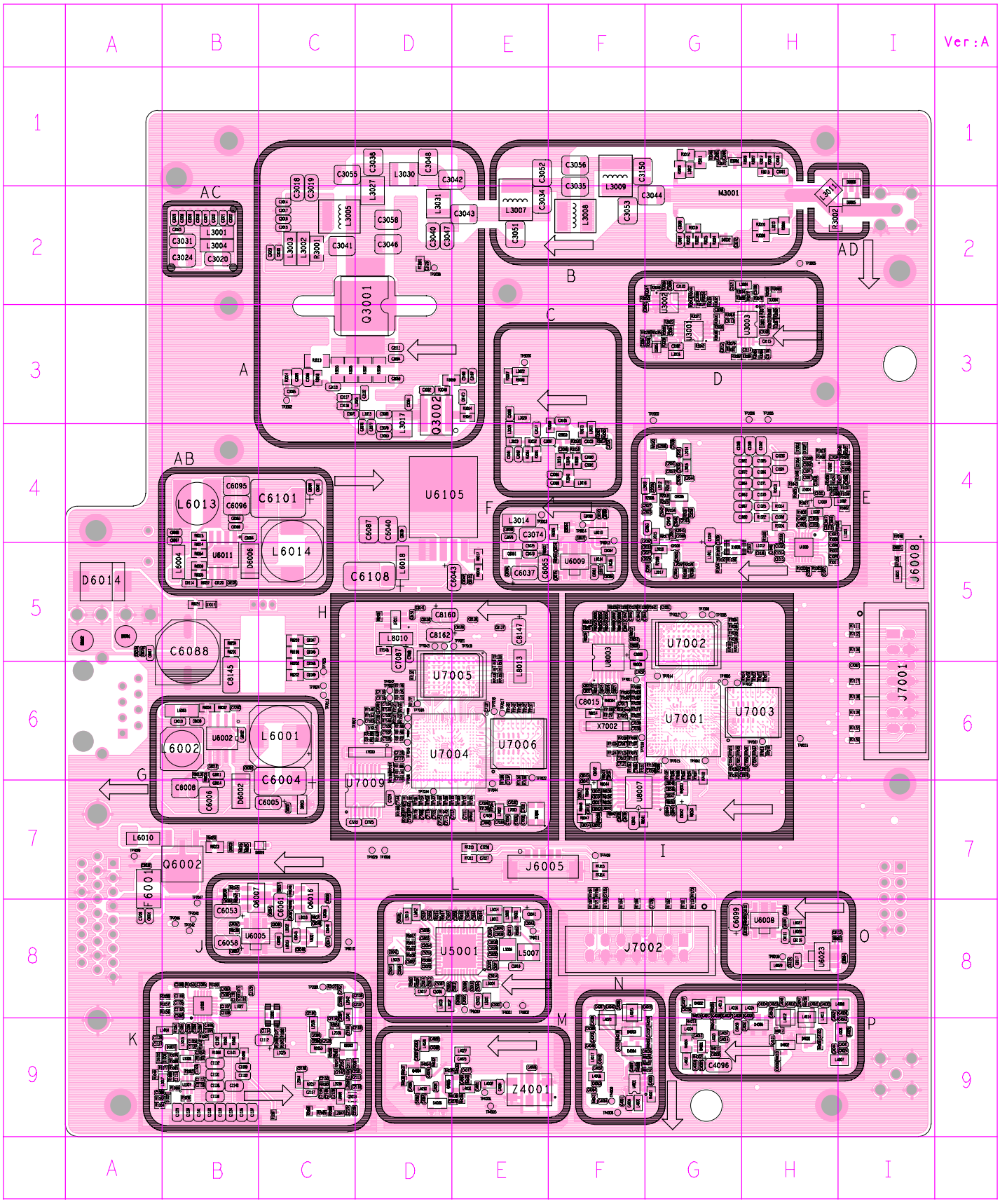
Step 3 Set the Aeroflex 3920 as follows:

- Freq: Be consistent with the frequency to be tested.
- STD IB 511(.153)
- Lvl: -116.0dBm

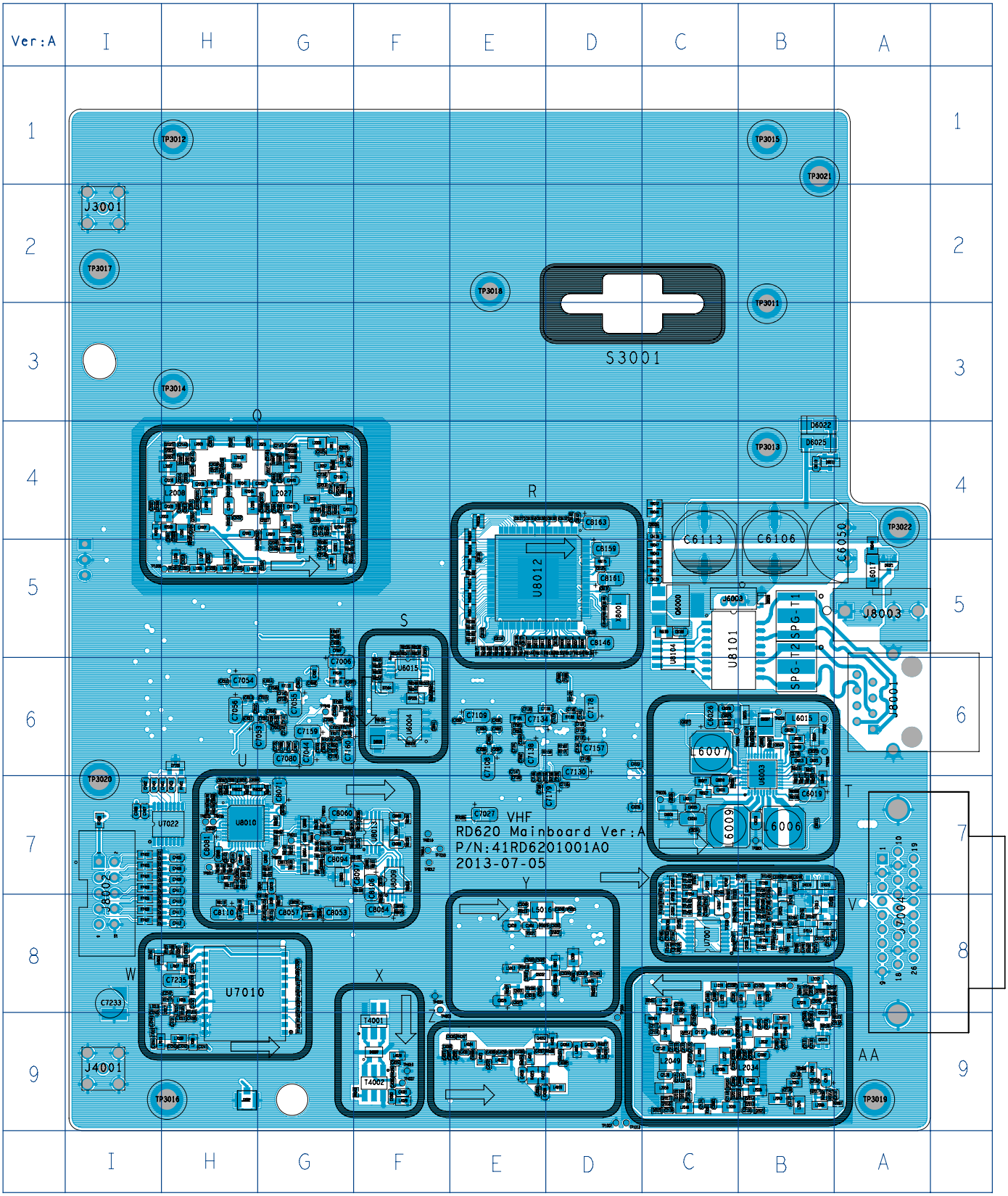
Step 3 Click the “Start” button.

Step 4 The average error rate is less than or equal to 5%.

9. PCB View Main PCB-Top Layer

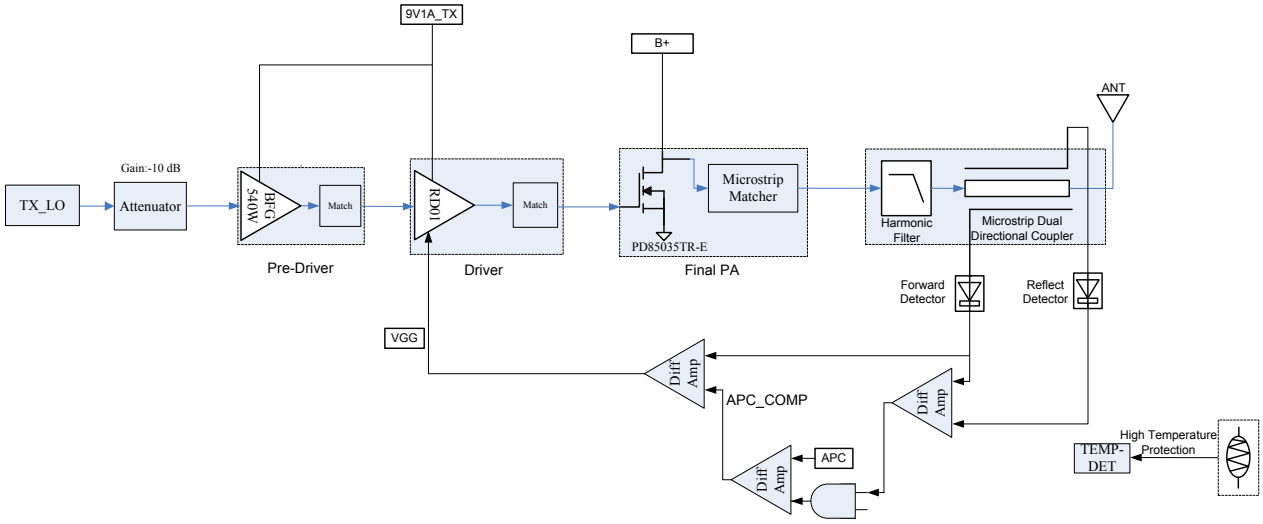


Main PCB-Bottom Layer

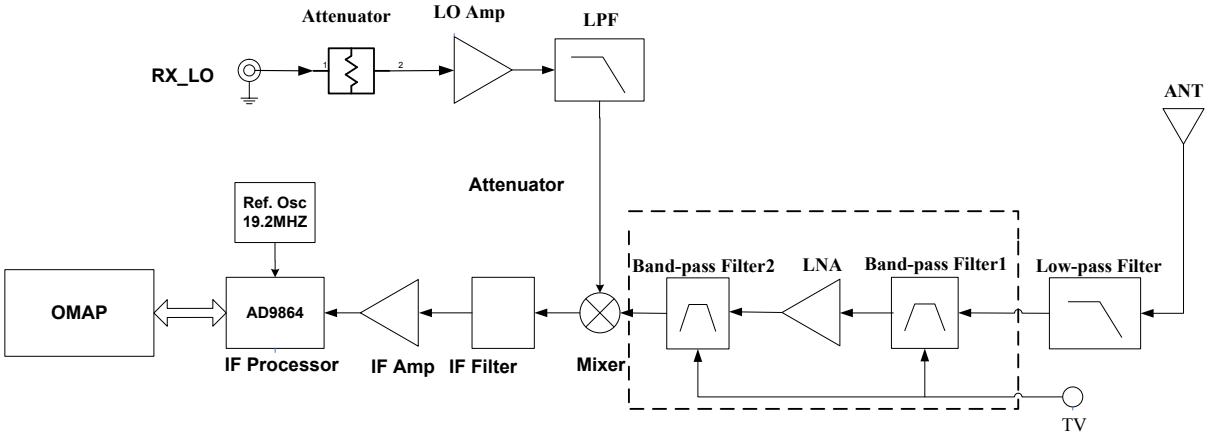


10. Block Diagram

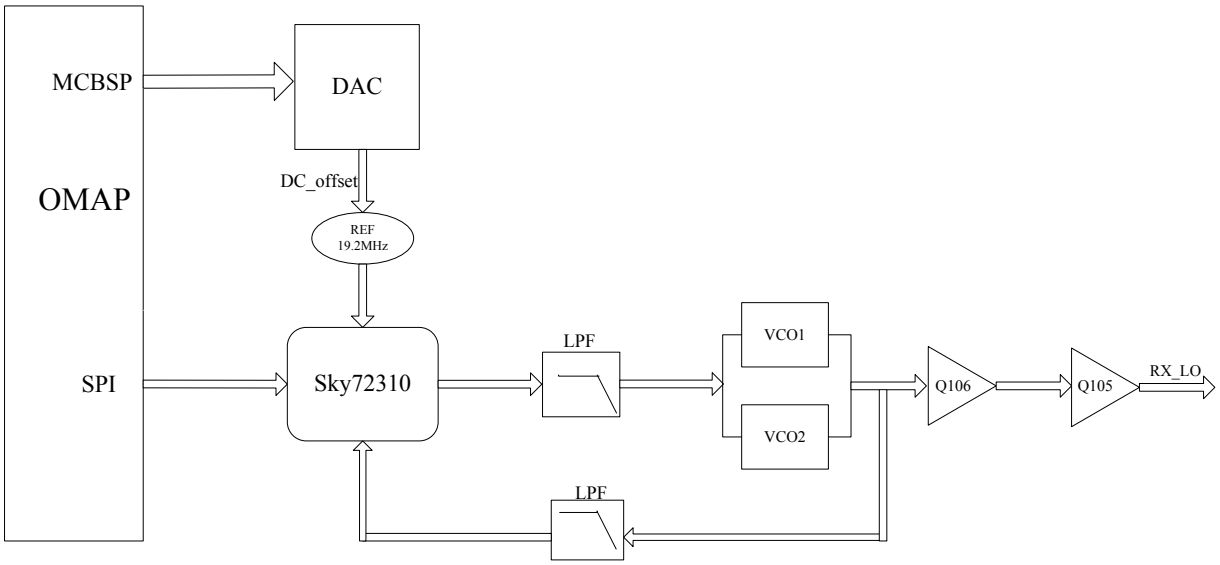
10.1 TX Circuit



10.2 RX Circuit

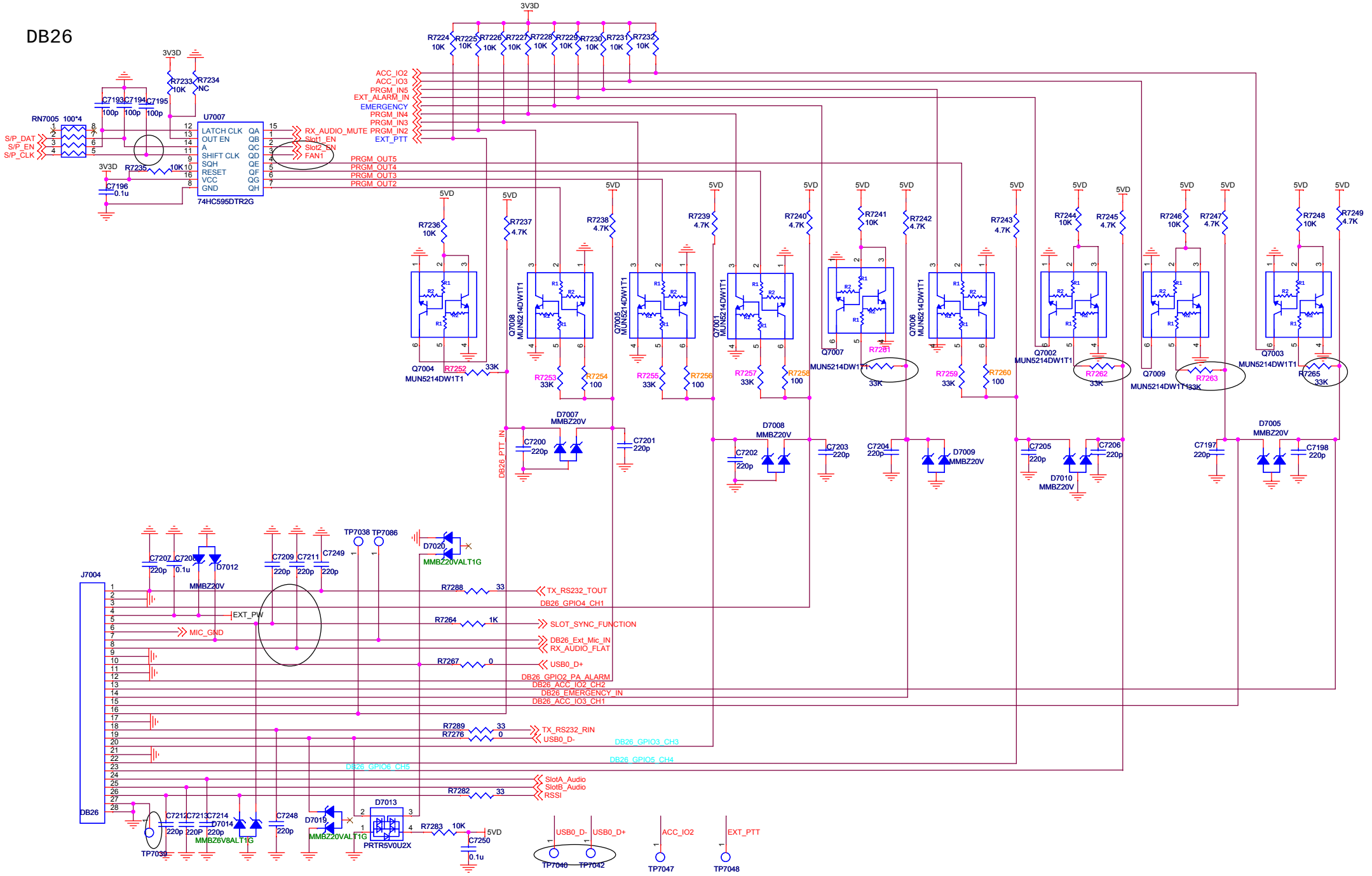


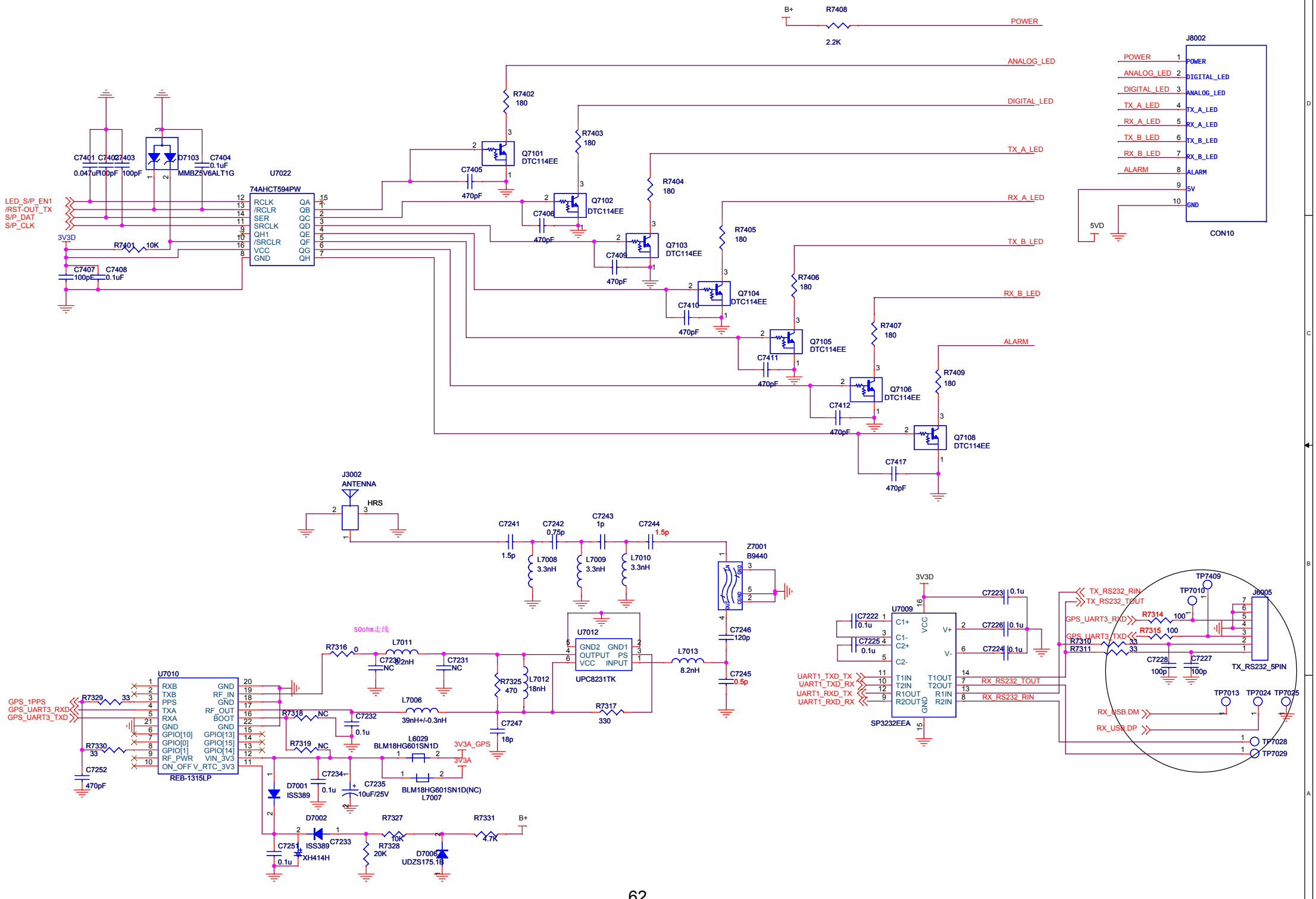
10.3 FUG Module

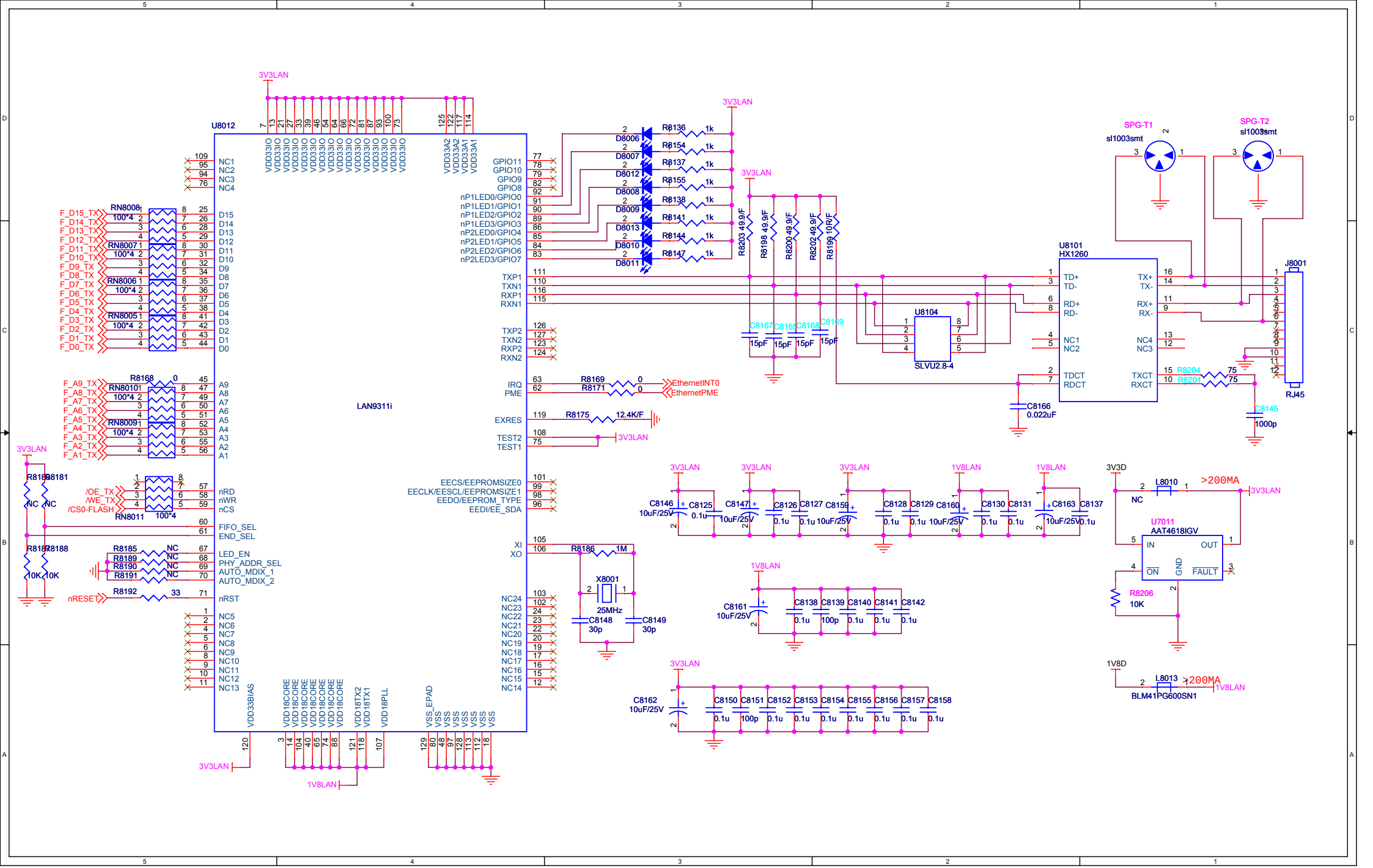


11. Schematic Diagram

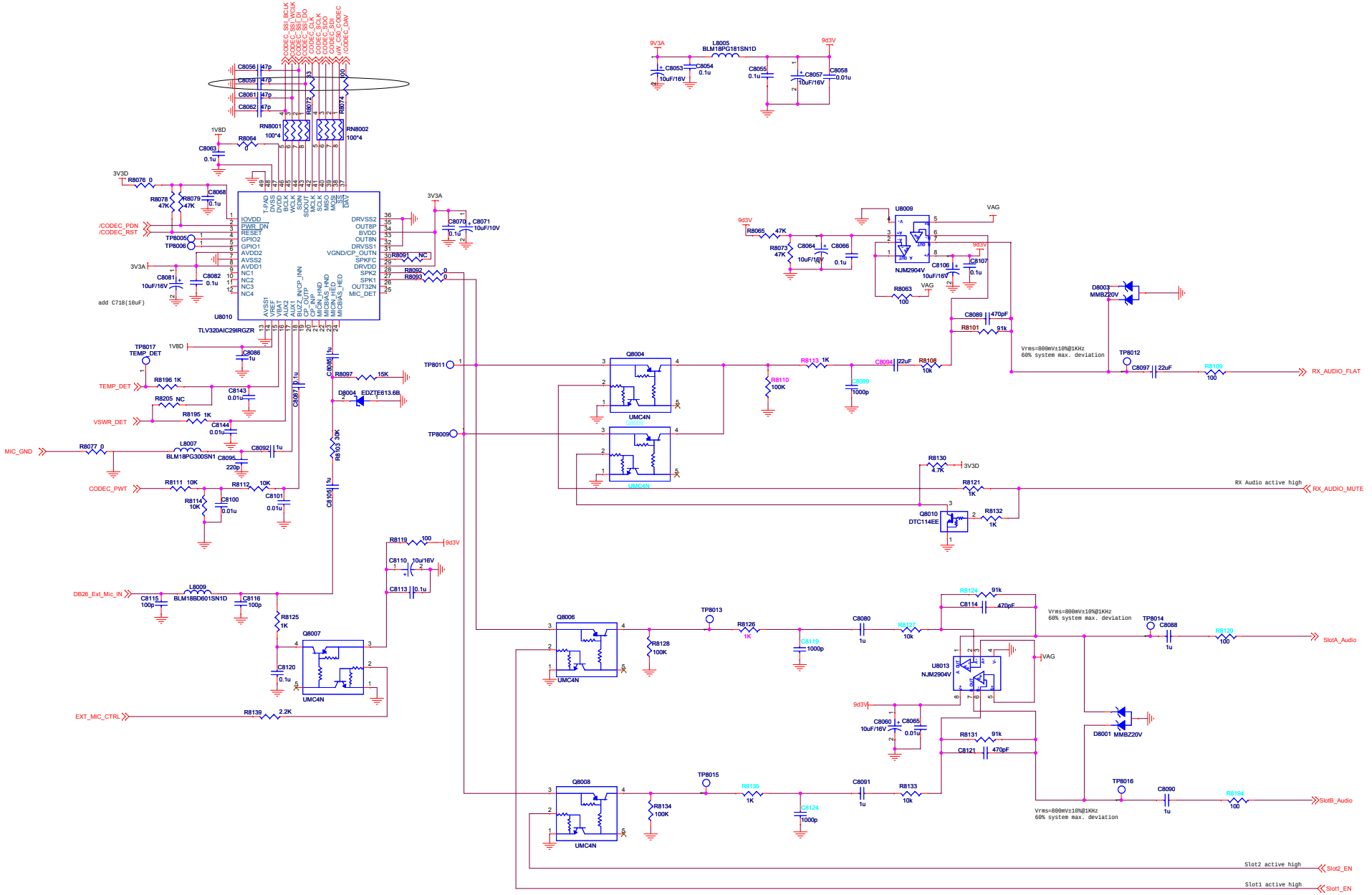
DB26

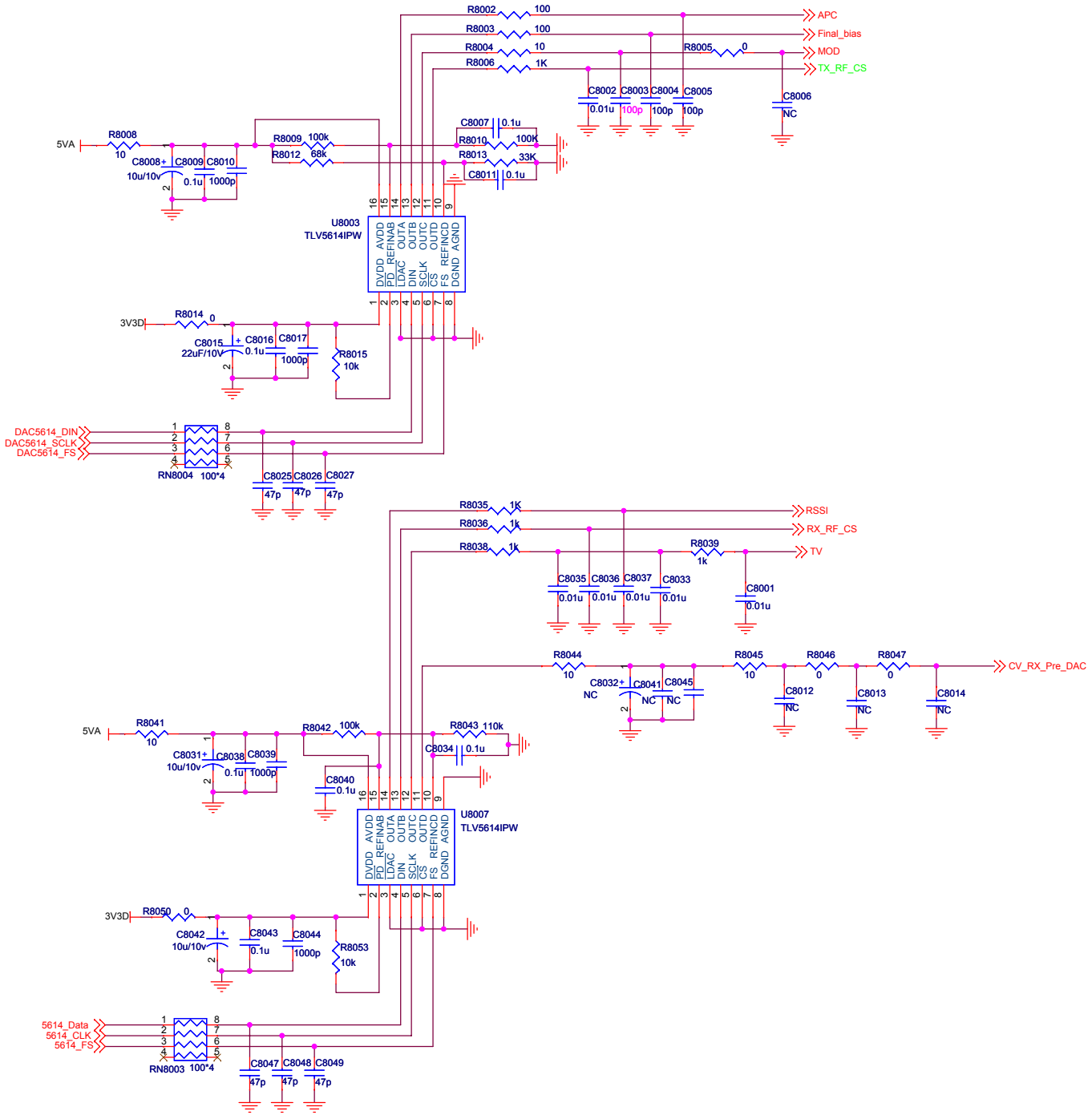



B+
R7408
2.2K
POWER
ANALOG_LED
DIGITAL_LED
TX_A_LED
RX_A_LED
TX_B_LED
RX_B_LED
ALARM
J8002
POWER
DIGITAL_LED
ANALOG_LED
TX_A_LED
RX_A_LED
TX_B_LED
RX_B_LED
ALARM
5V
GND
CON10
5VD
R7402 180
R7403 180
R7404 180
R7405 180
R7406 180
R7407 180
R7409 180
Q7101 DTC114EE
Q7102 DTC114EE
Q7103 DTC114EE
Q7104 DTC114EE
Q7105 DTC114EE
Q7106 DTC114EE
Q7108 DTC114EE
C7405 470pF
C7406 470pF
C7409 470pF
C7410 470pF
C7411 470pF
C7412 470pF
C7417 470pF
C7401 0.047uF
C7402 100pF
C7403 100pF
D7103 MMBZ5V6ALT1G
C7404 0.1uF
U7022
74AHCT594PW
RCLK QA
/RCLR QB
SER QC
SRCLK QD
QH1 QE
/SRCLR QF
VCC QG
GND QH
LED_S/P_EN1
/RST-OUT_TX
S/P_DAT
S/P_CLK
3V3D
R7401 10K
C7407 100pF
C7408 0.1uF
J3002
ANTENNA
HRS
C7241 1.5p
C7242 0.75p
C7243 1p
C7244 1.5p
L7008 3.3nH
L7009 3.3nH
L7010 3.3nH
Z7001
B9440
C7246 120p
C7245 0.5p
L7013 8.2nH
U7012
GND2 GND1
OUTPUT PS
VCC INPUT
UPC8231TK
50ohm走线
R7316 0
L7011 8.2nH
C7230 NC
C7231 NC
R7325 470
L7012 18nH
R7317 330
C7247 18p
L7006 39nH+/-0.3nH
R7318 NC
C7232 0.1u
R7319 NC
L6029 BLM18HG601SN1D
3V3A_GPS
3V3A
C7234 0.1u
C7235 10uF/25V
BLM18HG601SN1D(NC)
L7007
U7010
REB-1315LP
RXB TXB PPS TXA RXA GND GPIO[10] GPIO[0] GPIO[1] RF_PWR ON_OFF
GND RF_IN GND RF_OUT BOOT GND GPIO[13] GPIO[15] GPIO[14] VIN_3V3 V_RTC_3V3
GPS_1PPS
GPS_UART3_RXD
GPS_UART3_TXD
R7329 33
R7330 33
C7252 470pF
D7001 ISS389
D7002 ISS389
C7233
C7251 0.1u
XH414H
R7327 10K
R7328 20K
R7331 4.7K
D7006 UDZS175.1B
U7009
SP3232EEA
C7222 0.1u
C7225 0.1u
C7223 0.1u
C7226 0.1u
C7224 0.1u
UART1_TXD_TX
UART1_TXD_RX
UART1_RXD_TX
UART1_RXD_RX
RX_RS232_TOUT
RX_RS232_RIN
TX_RS232_RIN
TX_RS232_TOUT
GPS_UART3_RXD
GPS_UART3_TXD
R7314 100
R7315 100
R7310 33
R7311 33
C7228 100p
C7227 100p
J8005
TX_RS232_5PIN
TP7409
TP7010
TP7013
TP7024
TP7025
TP7028
TP7029
RX_USB.DM
RX_USB.DP

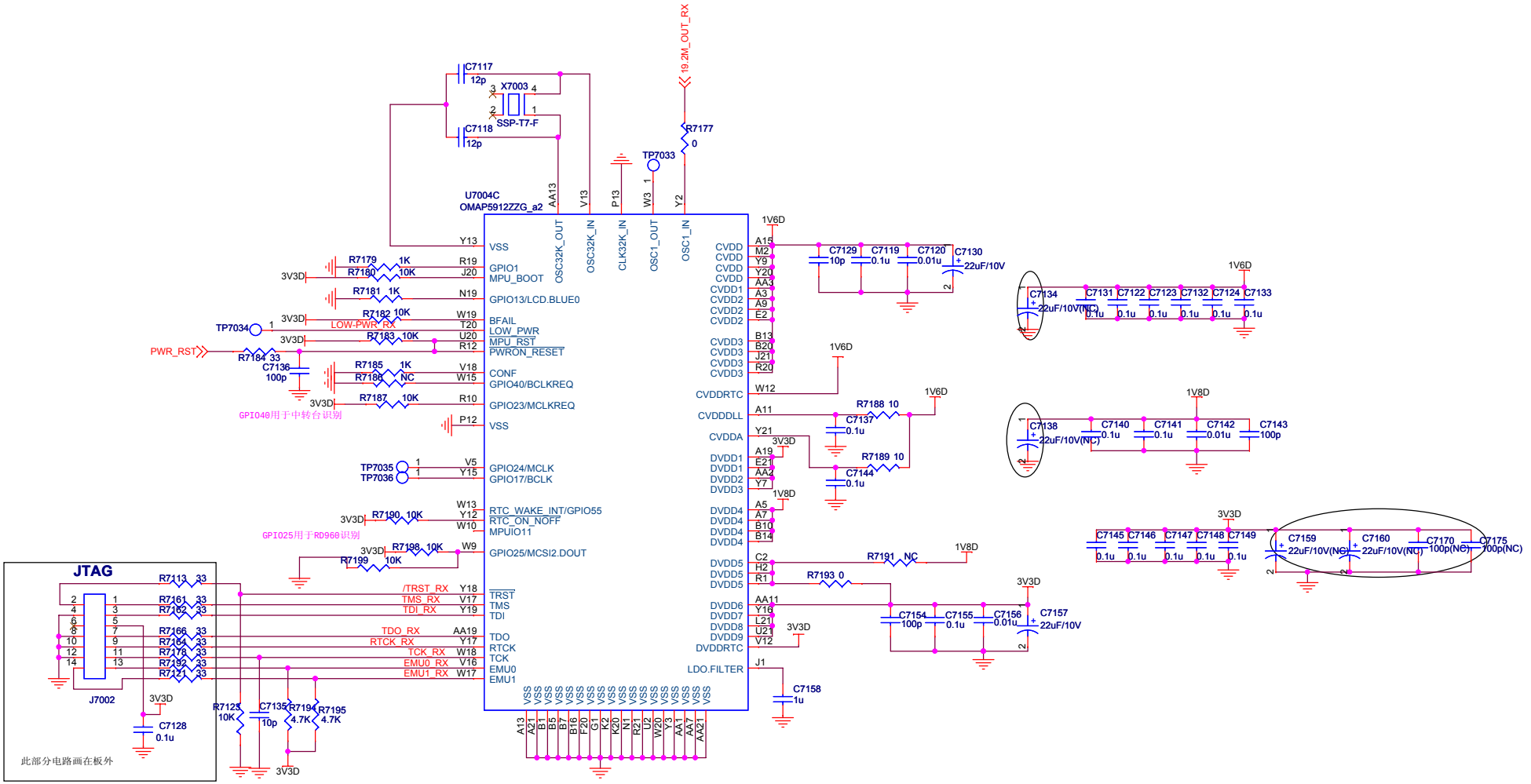

U8012
LAN9311i
3V3LAN
1V8LAN
U8101
HX1260
U8104
SLVU2.8-4
J8001
RJ45
SPG-T1
SPG-T2
sl1003smt
U7011
AAT4618IGV
L8010
L8013
BLM41PG600SN1
>200MA
X8001
25MHz
R8186 1M
R8175 12.4K/F
R8169 0
R8171 0
EthernetINT0
EthernetPME
R8203 49.9/F
R8198 49.9/F
R8200 49.9/F
R8202 49.9/F
R8199 10R/F
R8136 1k
R8154 1k
R8137 1k
R8155 1k
R8138 1k
R8141 1k
R8144 1k
R8147 1k
C8166 0.022uF
C8145 1000p
R8204 75
R8201 75
R8206 10K
RN8008
RN8007
RN8006
RN8005
RN80101
RN80091
RN8011
R8168 0
R8181
R8188
R8185
R8189
R8190
R8191
R8192 33
F_D15_TX
F_D14_TX
F_D13_TX
F_D12_TX
F_D11_TX
F_D10_TX
F_D9_TX
F_D8_TX
F_D7_TX
F_D6_TX
F_D5_TX
F_D4_TX
F_D3_TX
F_D2_TX
F_D1_TX
F_D0_TX
F_A9_TX
F_A8_TX
F_A7_TX
F_A6_TX
F_A5_TX
F_A4_TX
F_A3_TX
F_A2_TX
F_A1_TX
/OE_TX
/WE_TX
/CS0-FLASH
nRESET
D15
D14
D13
D12
D11
D10
D9
D8
D7
D6
D5
D4
D3
D2
D1
D0
A9
A8
A7
A6
A5
A4
A3
A2
A1
nRD
nWR
nCS
FIFO_SEL
END_SEL
LED_EN
PHY_ADDR_SEL
AUTO_MDIX_1
AUTO_MDIX_2
nRST
GPIO11
GPIO10
GPIO9
GPIO8
nP1LED0/GPIO0
nP1LED1/GPIO1
nP1LED2/GPIO2
nP1LED3/GPIO3
nP2LED0/GPIO4
nP2LED1/GPIO5
nP2LED2/GPIO6
nP2LED3/GPIO7
TXP1
TXN1
RXP1
RXN1
TXP2
TXN2
RXP2
RXN2
IRQ
PME
EXRES
TEST2
TEST1
EECS/EEPROMSIZE0
EECLK/EESCL/EEPROMSIZE1
EEDO/EEPROM_TYPE
EEDI/EE_SDA
XI
XO
C8146 10uF/25V
C8125 0.1u
C8147 10uF/25V
C8126 0.1u
C8127 0.1u
C8159 10uF/25V
C8128 0.1u
C8129 0.1u
C8160 10uF/25V
C8130 0.1u
C8131 0.1u
C8163 10uF/25V
C8137 0.1u
C8161 10uF/25V
C8138 0.1u
C8139 100p
C8140 0.1u
C8141 0.1u
C8142 0.1u
C8148 30p
C8149 30p
C8162 10uF/25V
C8150 0.1u
C8151 100p
C8152 0.1u
C8153 0.1u
C8154 0.1u
C8155 0.1u
C8156 0.1u
C8157 0.1u
C8158 0.1u
C8167 15pF
C8165 15pF
C8168 15pF
C8169 15pF
3V3D
1V8D

Codec & Audio

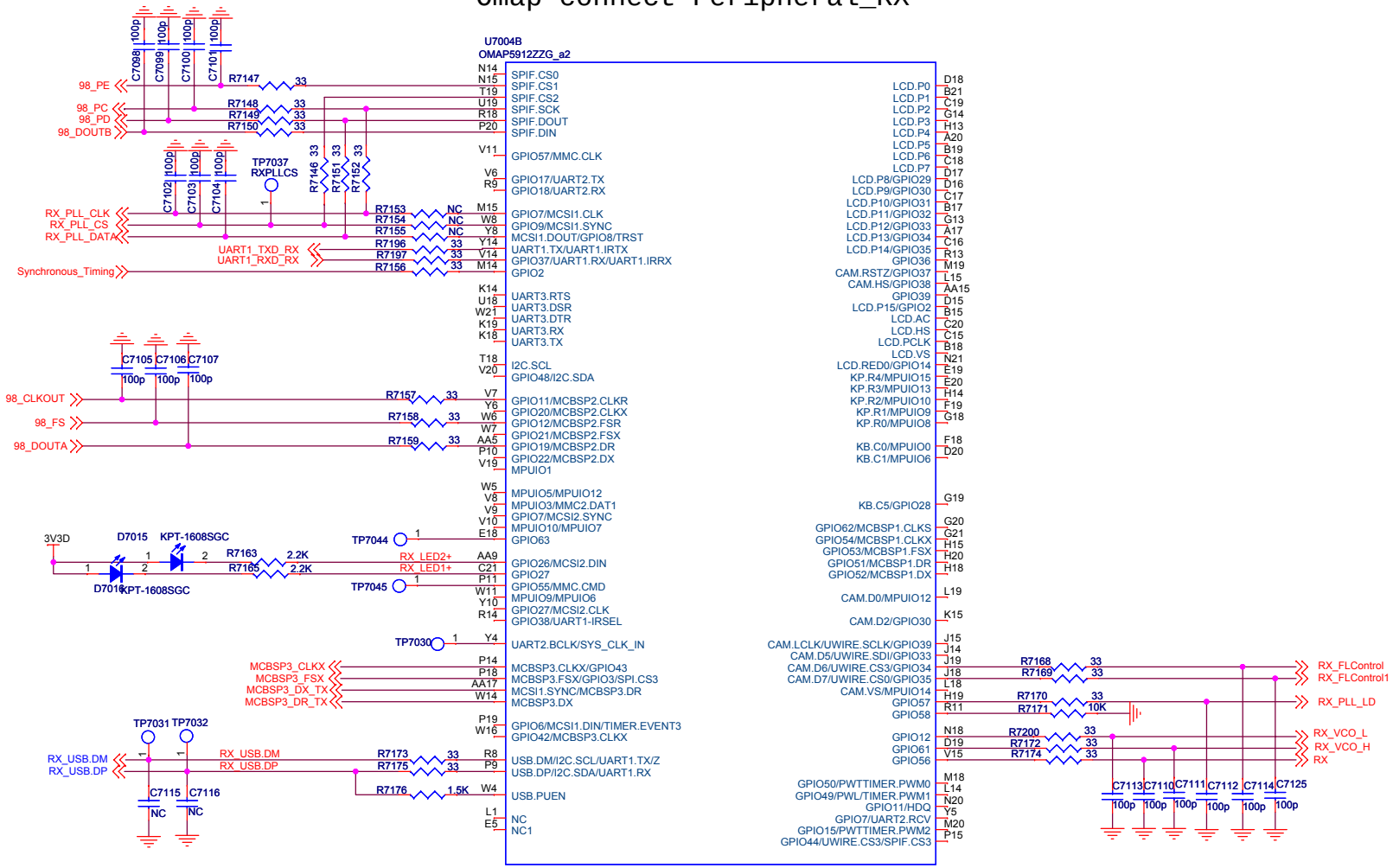

TLV320AIC29IRGZR
U8010
L8005 BLM18PG181SN1D
L8007 BLM18PG300SN1
L8009 BLM18BD601SN1D
U8009 NJM2904V
U8013 NJM2904V
Q8004 UMC4N
Q8006 UMC4N
Q8007 UMC4N
Q8008 UMC4N
Q8010 DTC114EE
D8003 MMBZ20V
D8001 MMBZ20V
D8004 EDZTE613.6B
TP8011
TP8009
TP8012
TP8013
TP8014
TP8015
TP8016
TP8017 TEMP_DET
TP8005
TP8006
RX_AUDIO_FLAT
RX_AUDIO_MUTE
SlotA_Audio
SlotB_Audio
Slot2_EN
Slot1_EN
Vrms=800mV±10%@1KHz
60% system max. deviation
RX Audio active high
Slot2 active high
Slot1 active high
/CODEC_PDN
/CODEC_RST
TEMP_DET
VSWR_DET
MIC_GND
CODEC_PWT
DB26_Ext_Mic_IN
EXT_MIC_CTRL
add C718(10uF)


R8002 100
R8003 100
R8004 10
R8006 1K
R8005 0
APC
Final_bias
MOD
TX_RF_CS
C8002 0.01u
C8003 100p
C8004 100p
C8005 100p
C8006 NC
5VA
R8008 10
C8008 10u/10v
C8009 0.1u
C8010 1000p
R8009 100k
R8012 68k
C8007 0.1u
R8010 100k
R8013 33K
C8011 0.1u
U8003
TLV5614IPW
DVDD AVDD REFINAB OUTA OUTB OUTC OUTD REFINCD
PD_RC LDAC DIN SCLK CS FS DGND AGND
3V3D
R8014 0
C8015 22uF/10V
C8016 0.1u
C8017 1000p
R8015 10k
DAC5614_DIN
DAC5614_SCLK
DAC5614_FS
RN8004 100*4
C8025 47p
C8026 47p
C8027 47p
R8035 1K
R8036 1k
R8038 1k
RSSI
RX_RF_CS
TV
R8039 1k
C8035 0.01u
C8036 0.01u
C8037 0.01u
C8033 0.01u
C8001 0.01u
R8044 10
R8045 10
R8046 0
R8047 0
CV_RX_Pre_DAC
C8032 NC
C8041 NC
C8045 NC
C8012 NC
C8013 NC
C8014 NC
5VA
R8041 10
C8031 10u/10v
C8038 0.1u
C8039 1000p
R8042 100k
R8043 110k
C8034 0.1u
C8040 0.1u
U8007
TLV5614IPW
3V3D
R8050 0
C8042 10u/10v
C8043 0.1u
C8044 1000p
R8053 10k
5614_Data
5614_CLK
5614_FS
RN8003 100*4
C8047 47p
C8048 47p
C8049 47p

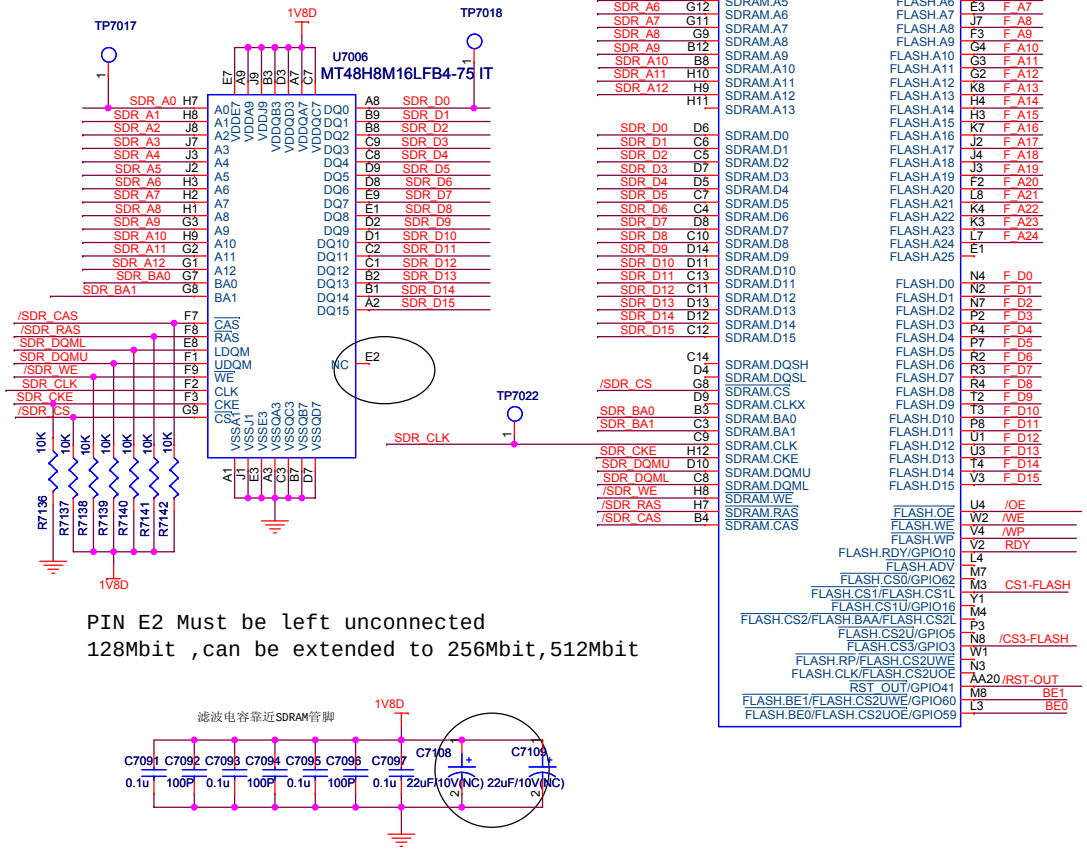
OMAP_Core_RX

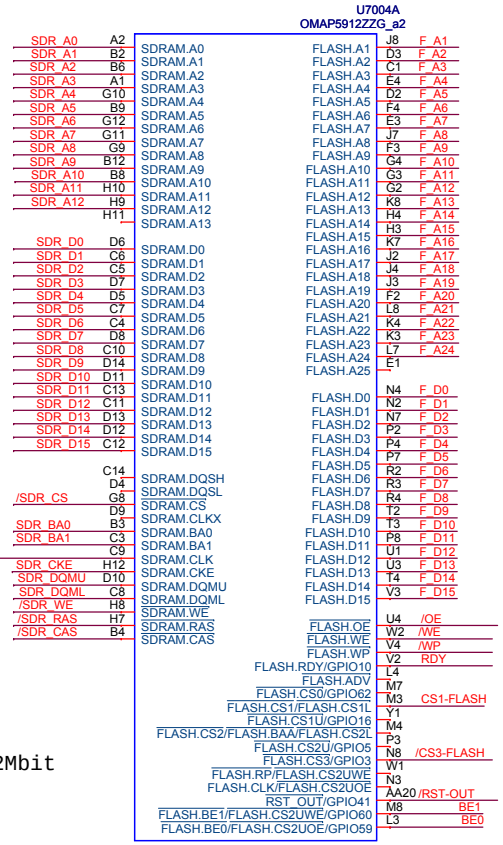

U7004C
OMAP5912ZZG_a2
C7117 12p
C7118 12p
X7003
SSP-T7-F
19.2M_OUT_RX
R7177 0
TP7033
VSS
GPIO1 MPU_BOOT
GPIO13/LCD.BLUE0
BFAIL
LOW_PWR
MPU_RST
PWRON_RESET
CONF
GPIO40/BCLKREQ
GPIO23/MCLKREQ
VSS
GPIO24/MCLK
GPIO17/BCLK
RTC_WAKE_INT/GPIO55
RTC_ON_NOFF
MPUIO11
GPIO25/MCSI2.DOUT
TRST
TMS
TDI
TDO
RTCK
TCK
EMU0
EMU1
OSC32K_OUT
OSC32K_IN
CLK32K_IN
OSC1_OUT
OSC1_IN
CVDD
CVDD1
CVDD2
CVDD3
CVDDRTC
CVDDDLL
CVDDA
DVDD1
DVDD2
DVDD3
DVDD4
DVDD5
DVDD6
DVDD7
DVDD8
DVDD9
DVDDRTC
LDO.FILTER
JTAG
J7002
/TRST_RX
TMS_RX
TDI_RX
TDO_RX
RTCK_RX
TCK_RX
EMU0_RX
EMU1_RX
GPIO40用于中转台识别
GPIO25用于RD960识别
此部分电路画在板外
1V6D
1V8D
3V3D

Omap connect Peripheral_RX

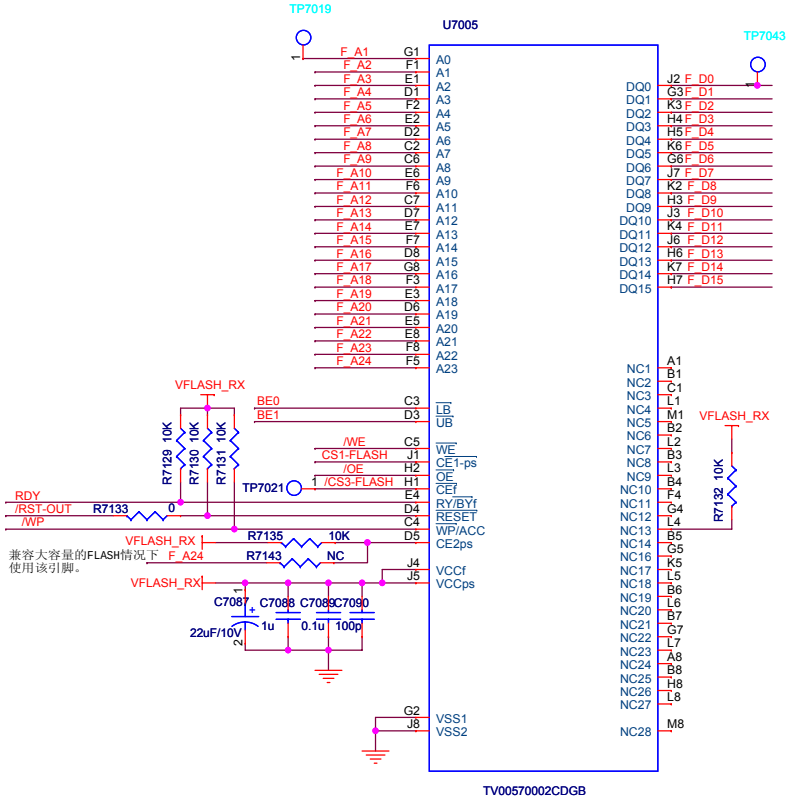


Memory_RX

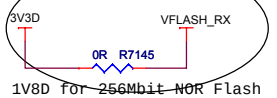




PIN E2 Must be left unconnected
128Mbit ,can be extended to 256Mbit,512Mbit

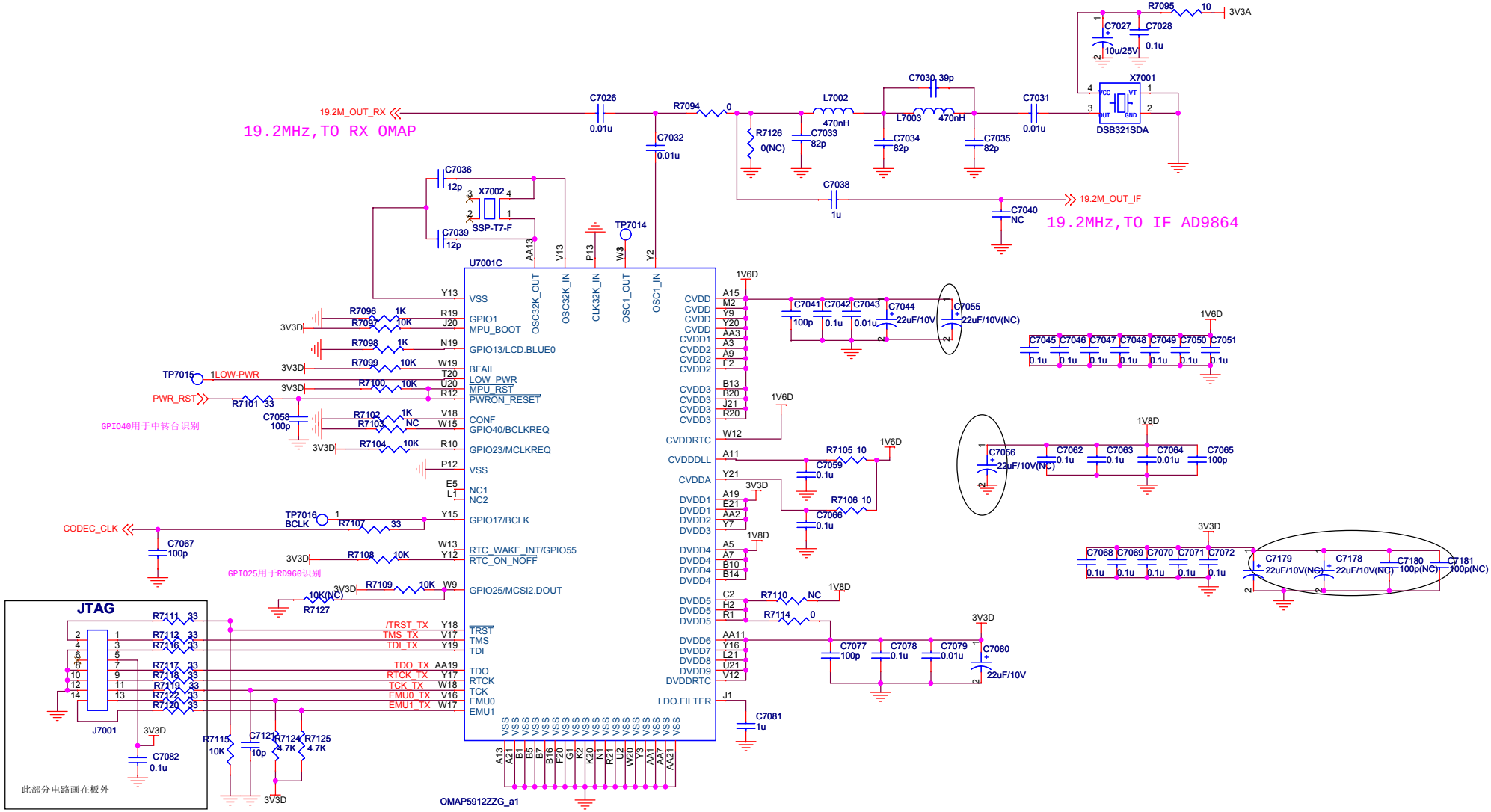


128Mbit NOR Flash , can be extended to 256Mbit

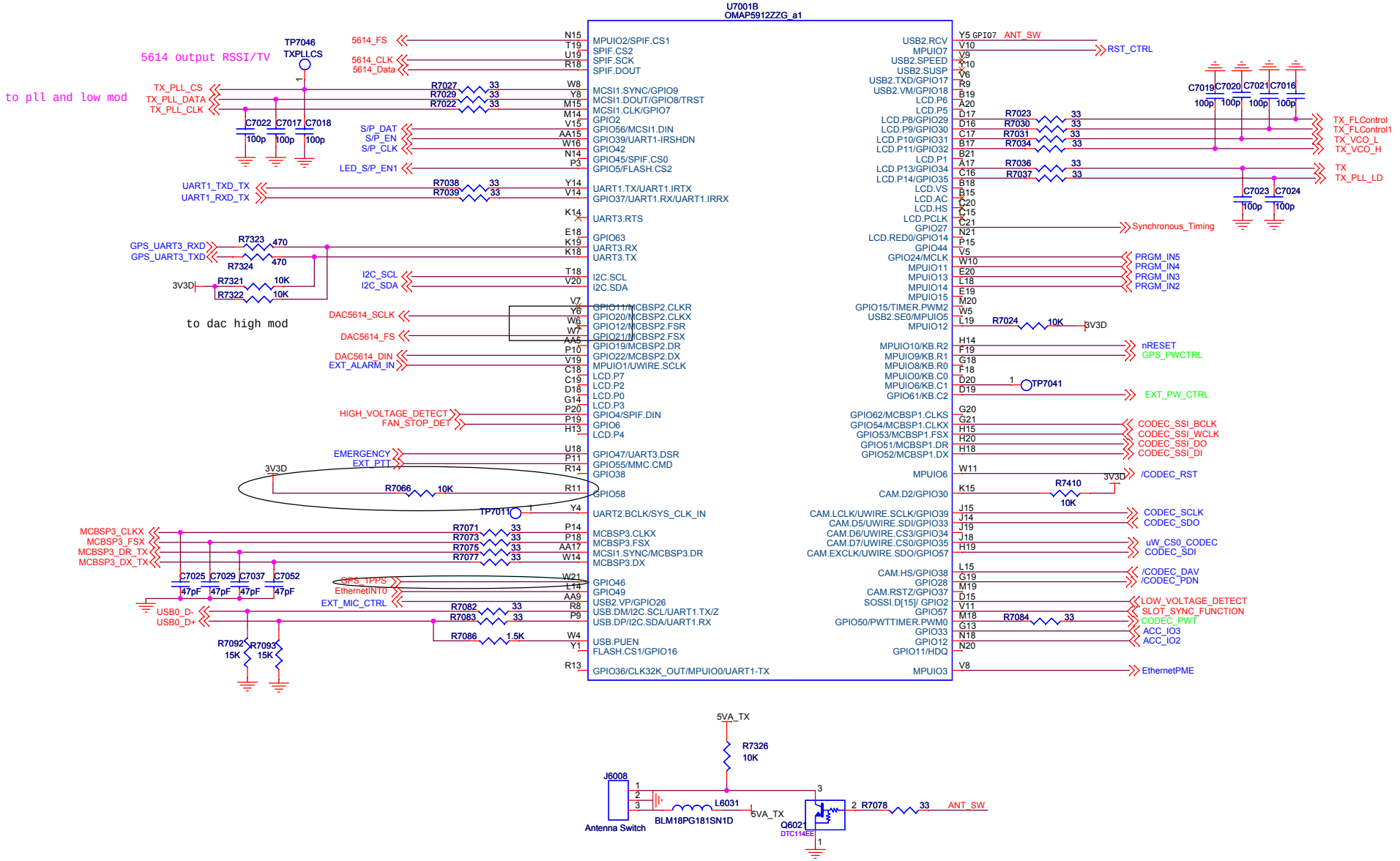


1V8D for ~~256Mbit~~ NOR Flash
3VD for 128Mbit NOR Flash

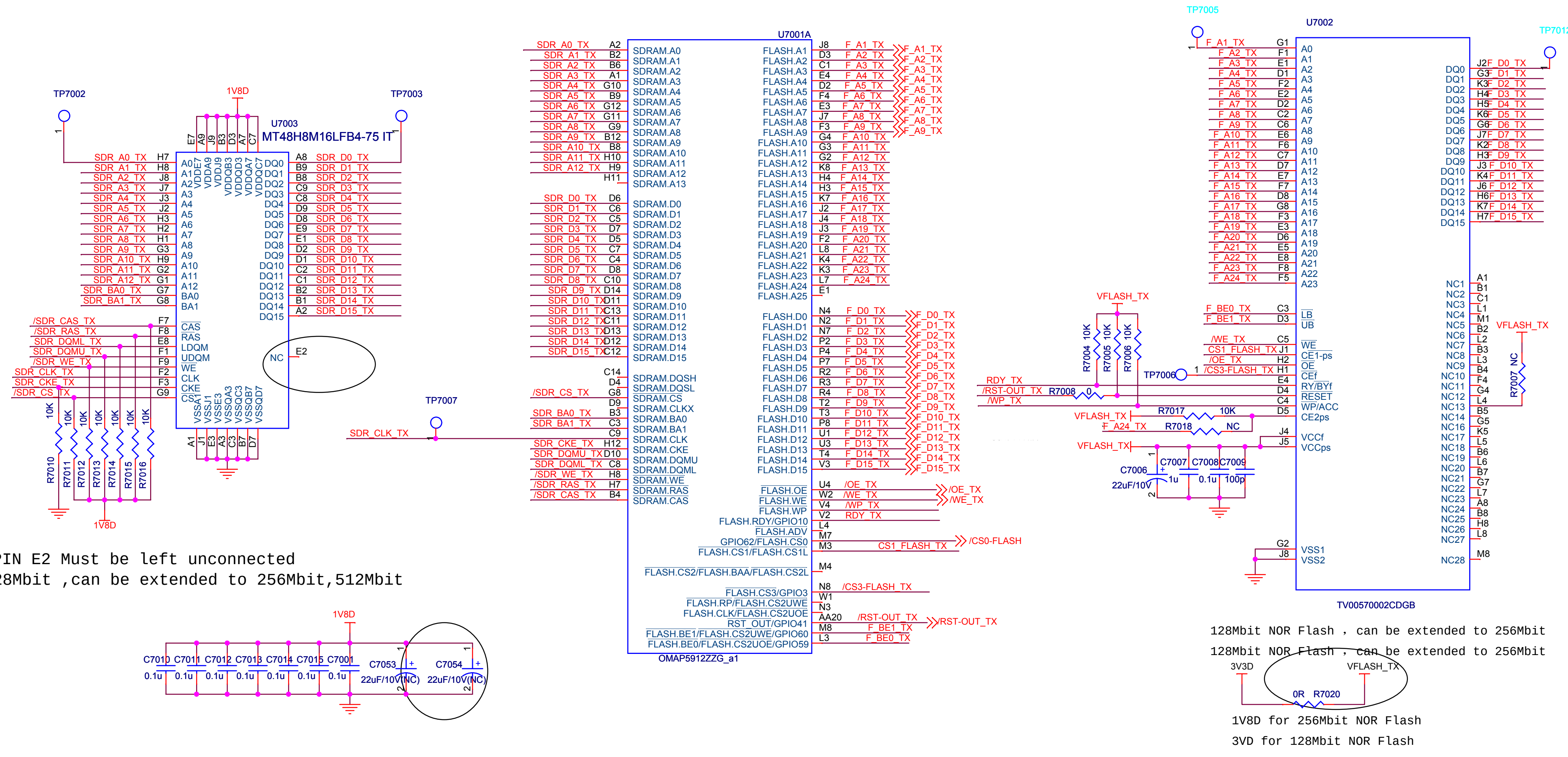
OMAP_Core_TX


19.2M_OUT_RX
19.2MHz,TO RX OMAP
19.2M_OUT_IF
19.2MHz,TO IF AD9864
DSB321SDA
SSP-T7-F
U7001C
OMAP5912ZZG_a1
JTAG
J7001
此部分电路画在板外
GPIO40用于中转台识别
GPIO25用于RD960识别
CODEC_CLK
1LOW-PWR
PWR_RST
BCLK
3V3A
1V6D
1V8D
3V3D

Omap connect Peripheral_TX



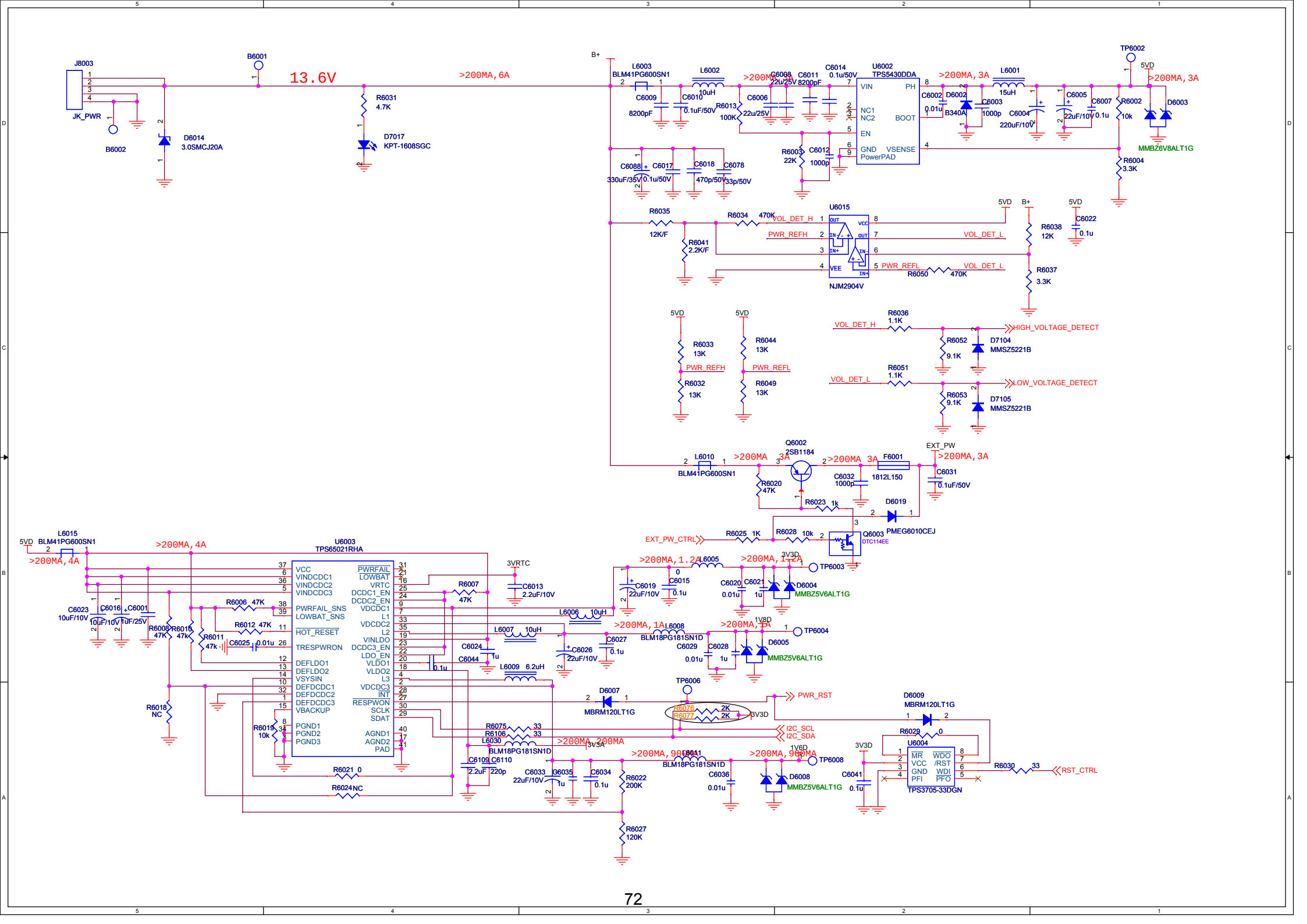
Memory_TX

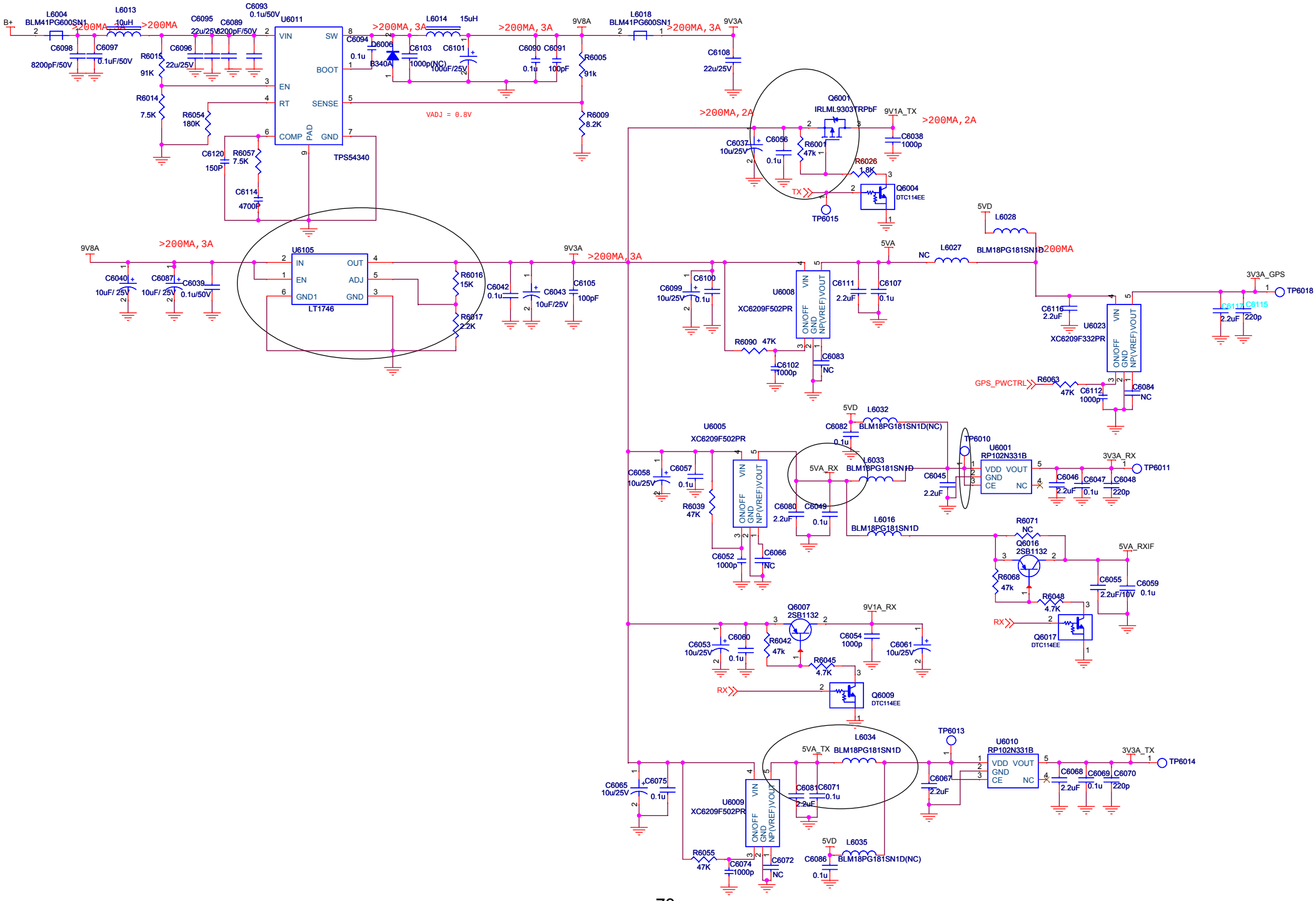


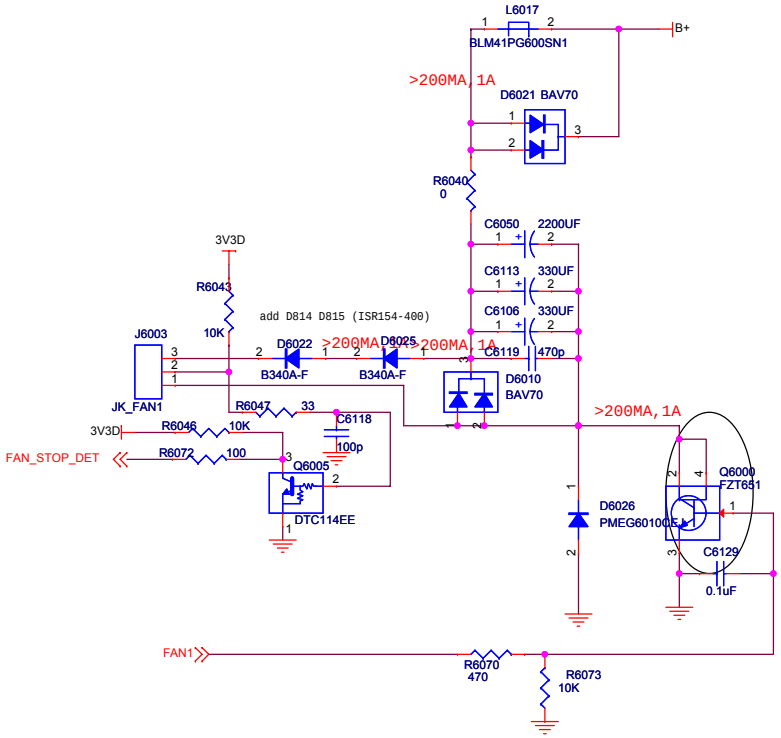
PIN E2 Must be left unconnected
128Mbit ,can be extended to 256Mbit,512Mbit

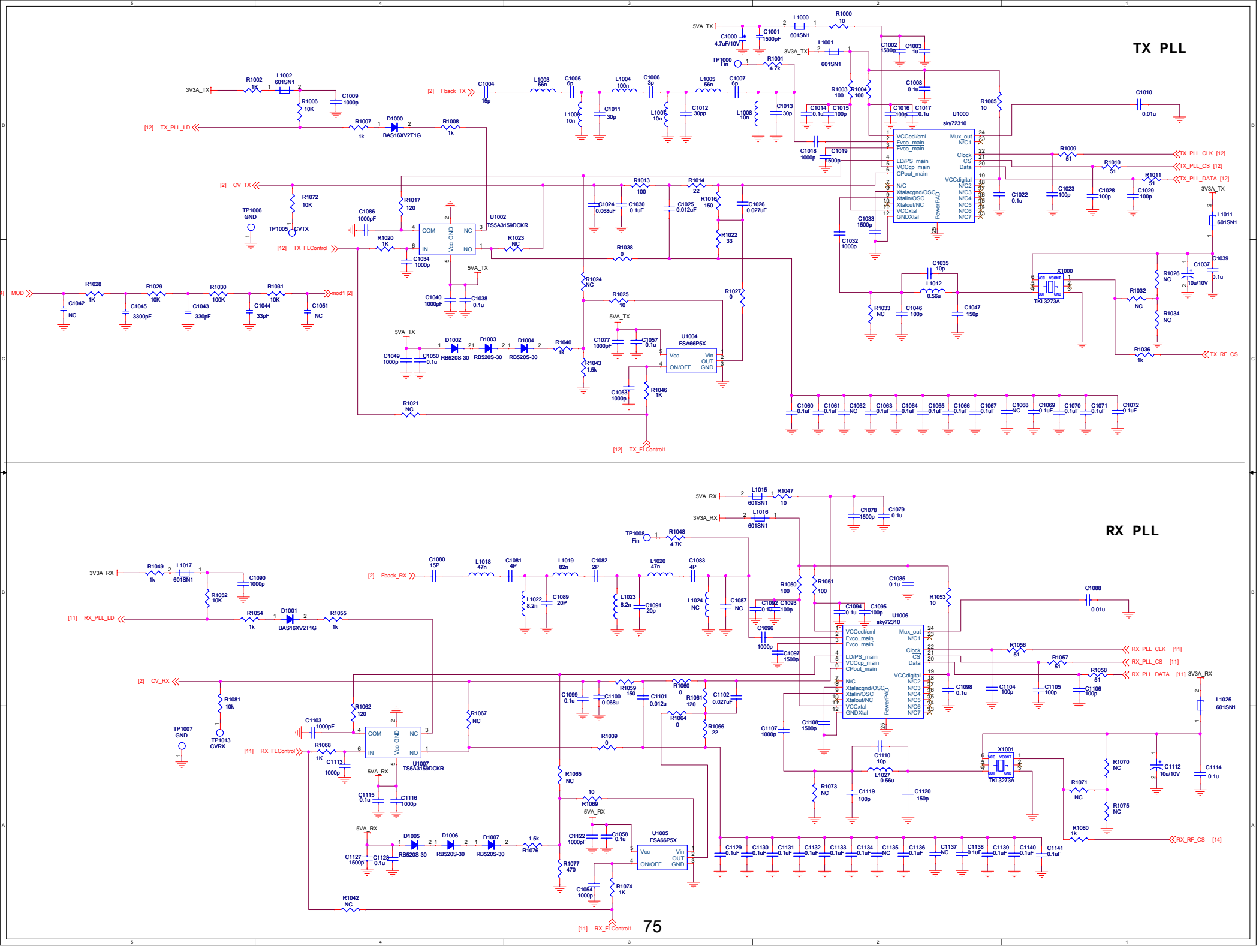
128Mbit NOR Flash , can be extended to 256Mbit
128Mbit NOR Flash , can be extended to 256Mbit

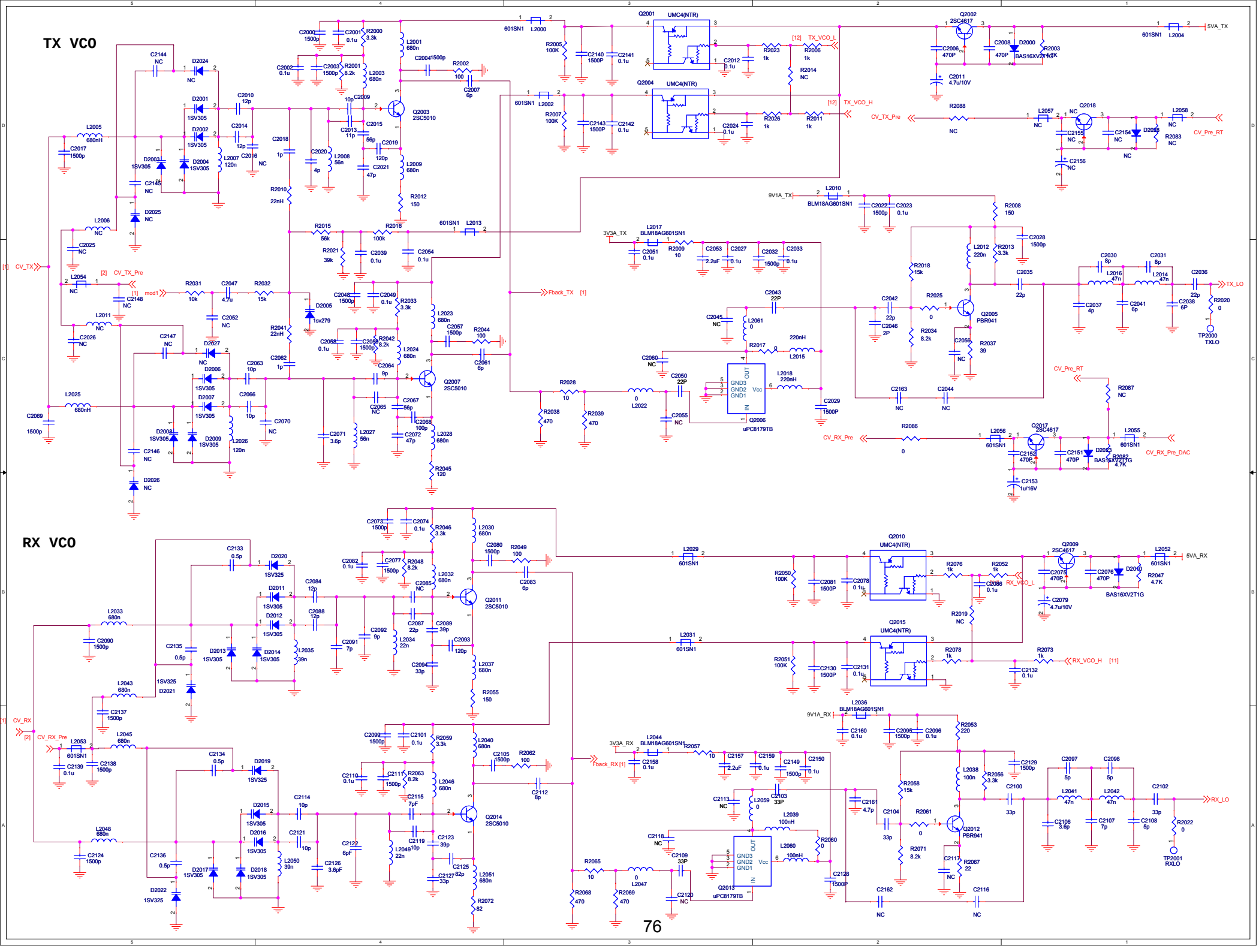
1V8D for 256Mbit NOR Flash
3VD for 128Mbit NOR Flash

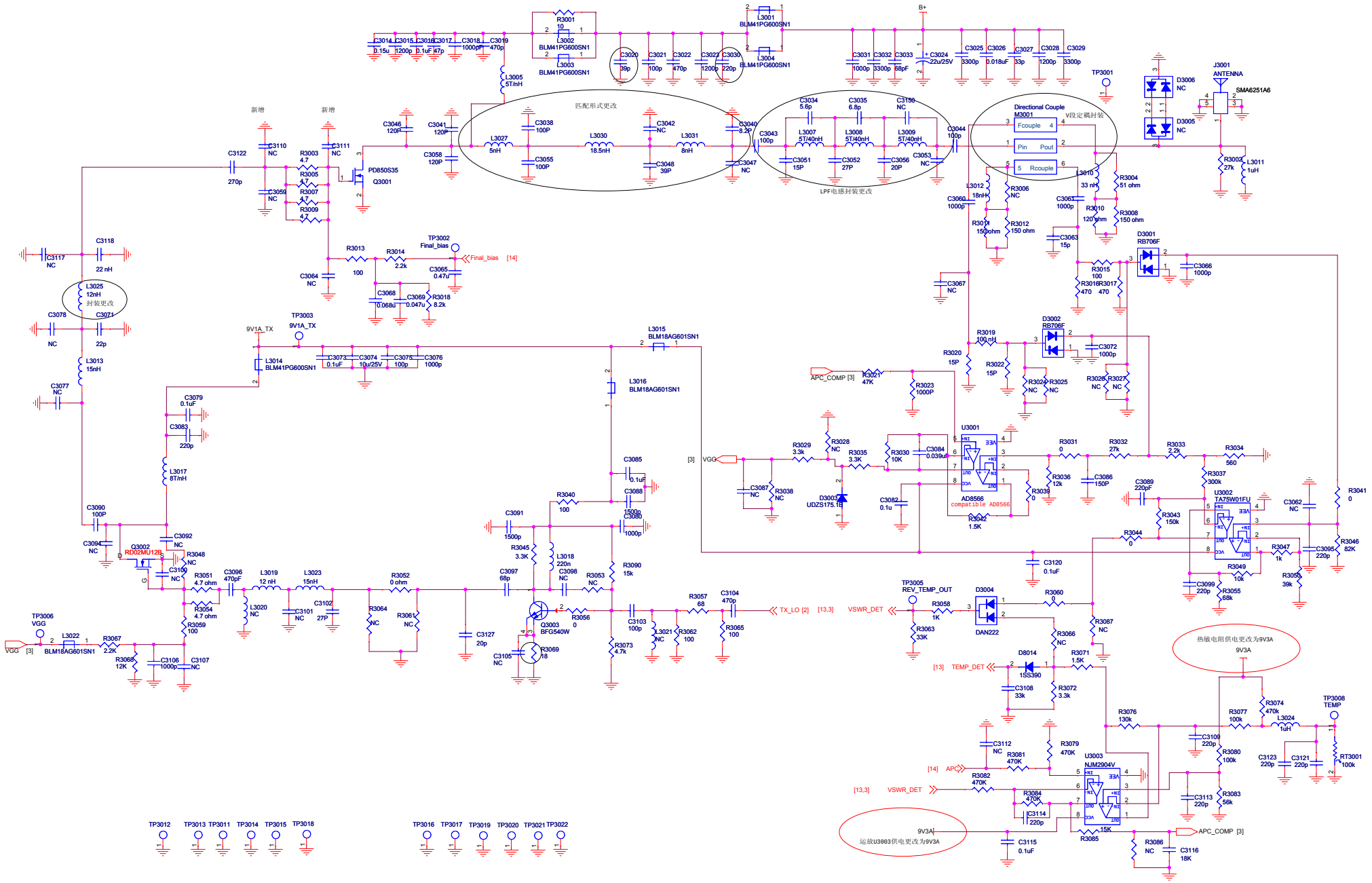

J8003
JK_PWR
B6001
B6002
13.6V
>200MA,6A
D6014
3.0SMCJ20A
R6031
4.7K
D7017
KPT-1608SGC
B+
L6003
BLM41PG600SN1
L6002
10uH
C6009
8200pF
C6010
0.1uF/50V
R6013
100K
C6008
22u/25V
C6011
8200pF
C6014
0.1u/50V
U6002
TPS5430DDA
VIN
PH
NC1
NC2
BOOT
EN
GND
VSENSE
PowerPAD
>200MA,3A
L6001
15uH
C6002
0.01u
D6002
B340A
C6003
1000p
C6004
220uF/10V
C6005
22uF/10V
C6007
0.1u
R6002
10k
TP6002
5VD
D6003
MMBZ6V8ALT1G
R6004
3.3K
C6088
330uF/35V
C6017
0.1u/50V
C6018
470p/50V
C6078
33p/50V
R6003
22K
C6012
1000p
R6035
12K/F
R6041
2.2K/F
R6034
470K
U6015
NJM2904V
VOL_DET_H
PWR_REFH
PWR_REFL
VOL_DET_L
R6050
470K
R6038
12K
R6037
3.3K
C6022
0.1u
R6033
13K
R6032
13K
R6044
13K
R6049
13K
R6036
1.1K
R6052
9.1K
D7104
MMSZ5221B
HIGH_VOLTAGE_DETECT
R6051
1.1K
R6053
9.1K
D7105
MMSZ5221B
LOW_VOLTAGE_DETECT
L6010
BLM41PG600SN1
>200MA
3A
Q6002
2SB1184
F6001
1812L150
EXT_PW
C6031
0.1uF/50V
R6020
47K
C6032
1000p
R6023
1k
D6019
EXT_PW_CTRL
R6025
1K
R6028
10k
Q6003
DTC114EE
PMEG6010CEJ
L6015
BLM41PG600SN1
>200MA,4A
U6003
TPS65021RHA
VCC
VINDCDC1
VINDCDC2
VINDCDC3
PWRFAIL_SNS
LOWBAT_SNS
HOT_RESET
TRESPWRON
DEFLDO1
DEFLDO2
VSYSIN
DEFDCDC1
DEFDCDC2
DEFDCDC3
VBACKUP
PGND1
PGND2
PGND3
PWRFAIL
LOWBAT
VRTC
DCDC1_EN
DCDC2_EN
VDCDC1
L1
VDCDC2
L2
VINLDO
DCDC3_EN
LDO_EN
VLDO1
VLDO2
L3
VDCDC3
INT
RESPWON
SCLK
SDAT
AGND1
AGND2
PAD
3VRTC
C6013
2.2uF/10V
R6007
47K
C6023
10uF/10V
C6016
10uF/10V
C6001
1uF/25V
R6008
47K
R6010
47K
R6006
47K
R6012
47K
R6011
47k
C6025
0.01u
R6018
NC
R6019
10k
R6021
0
R6024
NC
L6006
10uH
L6007
10uH
C6024
1u
C6044
0.1u
L6009
6.2uH
C6026
22uF/10V
C6027
0.1u
>200MA,1.2A
L6005
C6019
22uF/10V
C6015
0.1u
C6020
0.01u
C6021
1u
D6004
MMBZ5V6ALT1G
TP6003
3V3D
>200MA,1A
L6008
BLM18PG181SN1D
C6029
0.01u
C6028
1u
D6005
MMBZ5V6ALT1G
TP6004
1V8D
TP6006
D6007
MBRM120LT1G
R6076
2K
R6077
2K
PWR_RST
I2C_SCL
I2C_SDA
R6075
33
R6106
33
L6030
BLM18PG181SN1D
C6109
2.2uF
C6110
220p
>200MA,200MA
3V3A
C6033
22uF/10V
C6035
1u
C6034
0.1u
R6022
200K
R6027
120K
>200MA,900MA
L6041
BLM18PG181SN1D
C6036
0.01u
1V6D
TP6008
D6008
MMBZ5V6ALT1G
D6009
MBRM120LT1G
R6029
0
U6004
TPS3705-33DGN
MR
WDO
VCC
/RST
GND
WDI
PFI
PFO
C6041
0.1u
R6030
33
RST_CTRL

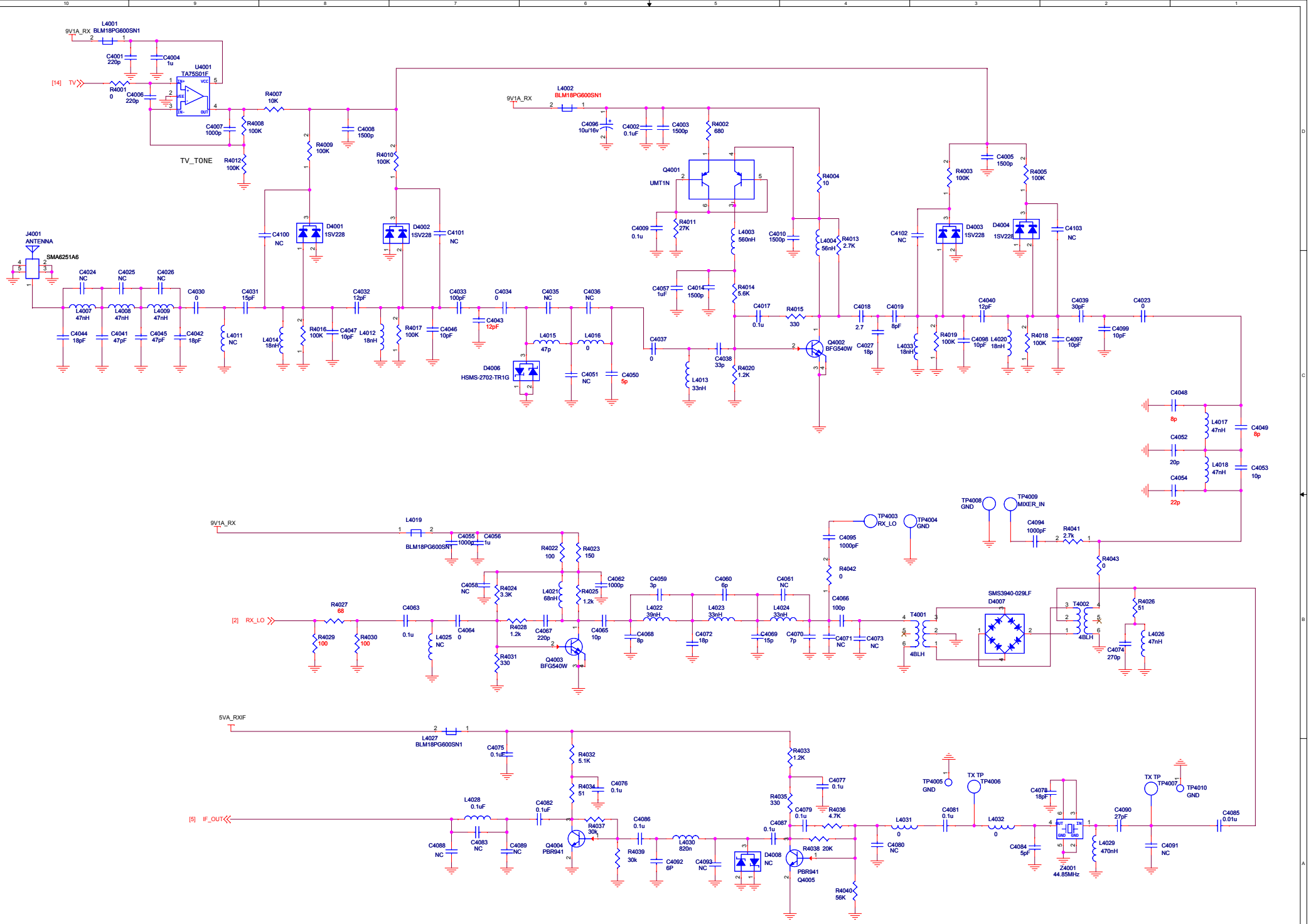

B+
L6004
BLM41PG600SN1
>200MA
L6013
10uH
>200MA
C6095
22u/25V
C6089
8200pF/50V
C6093
0.1u/50V
U6011
VIN
SW
BOOT
EN
RT
SENSE
COMP
PAD
GND
TPS54340
C6098
8200pF/50V
C6097
0.1uF/50V
R6015
91K
C6096
22u/25V
R6014
7.5K
R6054
180K
C6120
150P
R6057
7.5K
C6114
4700P
C6094
0.1u
D6006
B340A
>200MA, 3A
L6014
15uH
C6103
1000p(NC)
C6101
1000uF/25V
>200MA, 3A
C6090
0.1u
C6091
100pF
9V8A
R6005
91k
R6009
8.2K
VADJ = 0.8V
L6018
BLM41PG600SN1
>200MA, 3A
9V3A
C6108
22u/25V
>200MA, 2A
Q6001
IRLML9303TRPbF
9V1A_TX
>200MA, 2A
C6037
10u/25V
C6056
0.1u
R6001
47k
C6038
1000p
R6026
1.8K
TX
Q6004
DTC114EE
TP6015
9V8A
>200MA, 3A
C6040
10uF/ 25V
C6087
10uF/ 25V
C6039
0.1u/50V
U6105
IN
OUT
EN
ADJ
GND1
GND
LT1746
R6016
15K
R6017
2.2K
C6042
0.1u
C6043
10uF/25V
C6105
100pF
9V3A
>200MA, 3A
5VD
L6028
5VA
NC
L6027
BLM18PG181SN1D
200MA
C6099
10u/25V
C6100
0.1u
U6008
XC6209F502PR
ON/OFF
GND
NP(VREF)
VOUT
VIN
C6111
2.2uF
C6107
0.1u
R6090
47K
C6102
1000p
C6083
NC
C6116
2.2uF
U6023
XC6209F332PR
3V3A_GPS
TP6018
C6115
220p
GPS_PWCTRL
R6063
47K
C6112
1000p
C6084
NC
U6005
XC6209F502PR
5VD
L6032
C6082
0.1u
BLM18PG181SN1D(NC)
C6058
10u/25V
C6057
0.1u
R6039
47K
5VA_RX
L6033
BLM18PG181SN1D
TP6010
U6001
RP102N331B
VDD
VOUT
GND
CE
NC
C6045
2.2uF
C6046
2.2uF
C6047
0.1u
C6048
220p
3V3A_RX
TP6011
C6080
2.2uF
C6049
0.1u
L6016
BLM18PG181SN1D
C6052
1000p
C6066
NC
R6071
NC
Q6016
2SB1132
R6068
47k
R6048
4.7K
Q6017
DTC114EE
RX
5VA_RXIF
C6055
2.2uF/10V
C6059
0.1u
Q6007
2SB1132
9V1A_RX
C6053
10u/25V
C6060
0.1u
R6042
47k
C6054
1000p
C6061
10u/25V
R6045
4.7K
RX
Q6009
DTC114EE
L6034
TP6013
5VA_TX
BLM18PG181SN1D
U6010
RP102N331B
VDD
VOUT
GND
CE
NC
C6067
2.2uF
C6068
2.2uF
C6069
0.1u
C6070
220p
3V3A_TX
TP6014
C6065
10u/25V
C6075
0.1u
U6009
XC6209F502PR
C6081
2.2uF
C6071
0.1u
R6055
47K
C6074
1000p
C6072
NC
5VD
L6035
C6086
0.1u
BLM18PG181SN1D(NC)

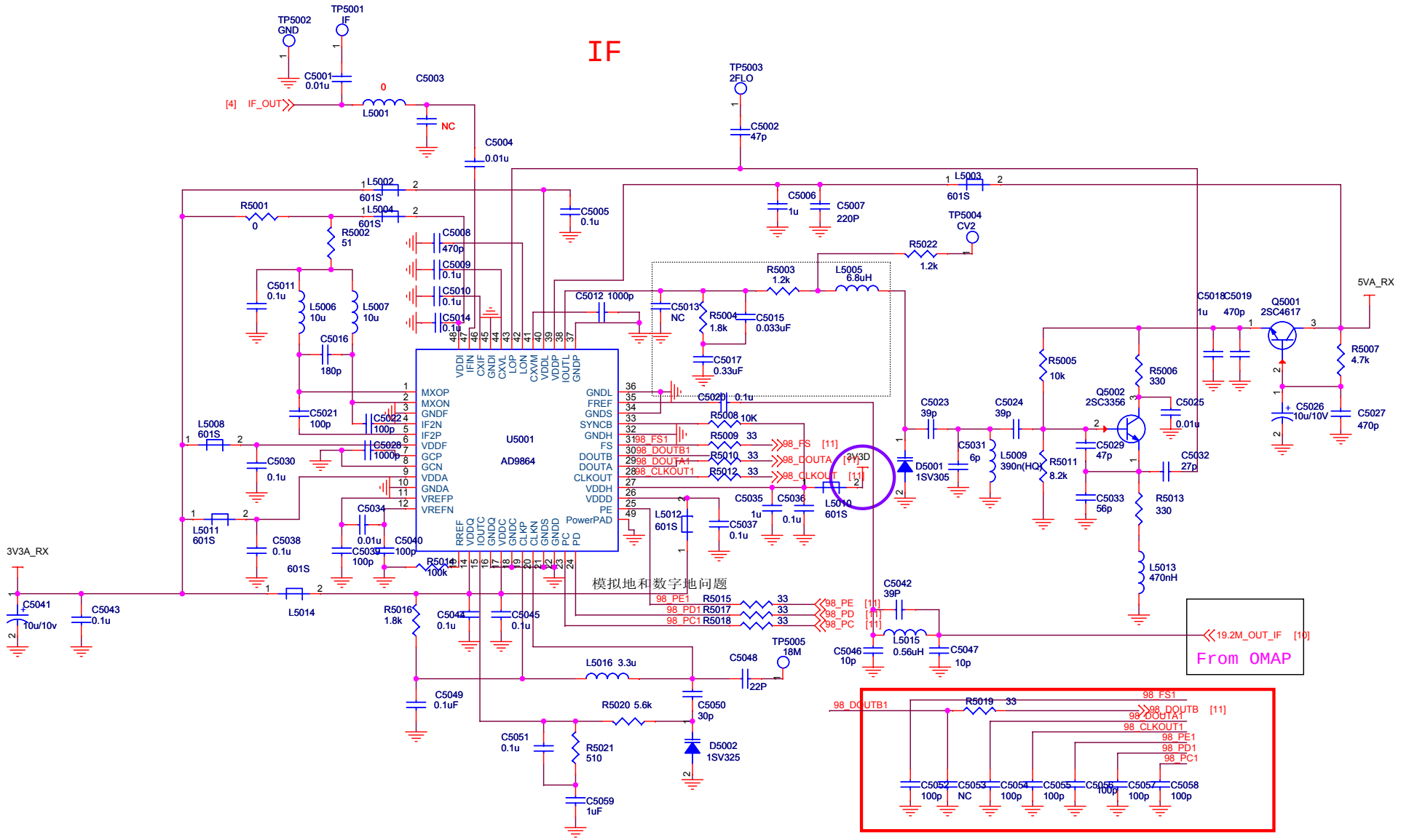

L6017
BLM41PG600SN1
B+
>200MA,1A
D6021 BAV70
R6040
0
C6050 2200UF
C6113 330UF
C6106 330UF
C6119 470p
3V3D
R6043
10K
add D814 D815 (ISR154-400)
J6003
JK_FAN1
D6022
B340A-F
D6025
B340A-F
>200MA,1A
D6010
BAV70
>200MA,1A
R6047 33
C6118
100p
3V3D
R6046 10K
FAN_STOP_DET
R6072 100
Q6005
DTC114EE
D6026
PMEG6010CEJ
Q6000
FZT651
C6129
0.1uF
FAN1
R6070
470
R6073
10K


TX PLL
RX PLL
U1000
sky72310
U1002
TS5A3159DCKR
U1004
FSA66P5X
U1006
sky72310
U1007
TS5A3159DCKR
U1005
FSA66P5X
X1000
TKL3273A
X1001
TKL3273A
D1000
BAS16XV2T1G
D1001
BAS16XV2T1G
D1002
RB520S-30
D1003
RB520S-30
D1004
RB520S-30
D1005
RB520S-30
D1006
RB520S-30
D1007
RB520S-30
5VA_TX
3V3A_TX
5VA_RX
3V3A_RX
[2] Fback_TX
[2] CV_TX
[12] TX_PLL_LD
[12] TX_FLControl
[12] TX_FLControl1
TX_PLL_CLK [12]
TX_PLL_CS [12]
TX_PLL_DATA [12]
TX_RF_CS
[2] Fback_RX
[2] CV_RX
[11] RX_PLL_LD
[11] RX_FLControl
[11] RX_FLControl1
RX_PLL_CLK [11]
RX_PLL_CS [11]
RX_PLL_DATA [11]
RX_RF_CS [14]
MOD
mod1 [2]
TP1000 Fin
TP1008 Fin
TP1005 CVTX
TP1013 CVRX
TP1006 GND
TP1007 GND


TX VCO
RX VCO
Q2001 UMC4(NTR)
Q2004 UMC4(NTR)
Q2003 2SC5010
Q2007 2SC5010
Q2011 2SC5010
Q2014 2SC5010
Q2006 uPC8179TB
Q2013 uPC8179TB
Q2002 2SC4617
Q2017 2SC4617
Q2009 2SC4617
Q2005 PBR941
Q2012 PBR941
Q2018
Q2010 UMC4(NTR)
Q2015 UMC4(NTR)
D2000 BAS16XV2T1G
D2001 1SV305
D2002 1SV305
D2003 1SV305
D2004 1SV305
D2005 1sv279
D2006 1SV305
D2007 1SV305
D2008 1SV305
D2009 1SV305
D2011 1SV305
D2012 1SV305
D2013 1SV305
D2014 1SV305
D2015 1SV305
D2016 1SV305
D2017 1SV305
D2018 1SV305
D2020 1SV325
D2021 1SV325
D2022 1SV325
D2023 BAS16XV2T1G
D2024 NC
D2025 NC
D2026 NC
D2027 NC
[12] TX_VCO_L
[12] TX_VCO_H
[11] RX_VCO_H
[1] CV_TX
[2] CV_TX_Pre
[1] CV_RX
[2] CV_RX_Pre
CV_TX_Pre
CV_Pre_RT
CV_RX_Pre
CV_RX_Pre_DAC
5VA_TX
5VA_RX
9V1A_TX
9V1A_RX
3V3A_TX
3V3A_RX
Fback_TX [1]
Fback_RX [1]
TX_LO
RX_LO
TXLO
RXLO
mod1
601SN1
BLM18AG601SN1
GND3 GND2 GND1 OUT Vcc IN


匹配形式更改
LPF电感封装更改
新增
新增
Directional Couple
M3001
Fcouple
Pin
Pout
Rcouple
V段定耦封装
PD850S35
Q3001
Final_bias [14]
9V1A_TX
VGG [3]
APC_COMP [3]
VSWR_DET [13,3]
TEMP_DET [13]
TX_LO [2] [13,3]
AD8566
compatible AD8566
热敏电阻供电更改为9V3A
9V3A
运放U3003供电更改为9V3A
APC [14]
77


L4001
9V1A_RX
BLM18PG600SN1
C4001 220p
C4004 1u
U4001
TA75S01F
[14] TV
R4001 0
C4006 220p
R4007 10K
C4007 1000p
R4008 100K
R4012 100K
TV_TONE
R4009 100K
C4008 1500p
R4010 100K
L4002
BLM18PG600SN1
9V1A_RX
C4096 10u/16v
C4002 0.1uF
C4003 1500p
R4002 680
Q4001
UMT1N
C4009 0.1u
R4011 27K
L4003 560nH
C4010 1500p
R4004 10
L4004 56nH
R4013 2.7K
C4005 1500p
R4003 100K
R4005 100K
C4102 NC
D4003 1SV228
D4004 1SV228
C4103 NC
J4001
ANTENNA
SMA6251A6
C4100 NC
D4001 1SV228
D4002 1SV228
C4101 NC
C4024 NC
C4025 NC
C4026 NC
C4030 0
C4031 15pF
C4032 12pF
C4033 100pF
C4034 0
C4035 NC
C4036 NC
L4007 47nH
L4008 47nH
L4009 47nH
C4044 18pF
C4041 47pF
C4045 47pF
C4042 18pF
L4011 NC
L4014 18nH
R4016 100K
C4047 10pF
L4012 18nH
R4017 100K
C4046 10pF
C4043 12pF
D4006
HSMS-2702-TR1G
L4015 47p
L4016 0
C4051 NC
C4050 5p
C4057 1uF
C4014 1500p
R4014 5.6K
C4017 0.1u
R4015 330
C4037 0
C4038 33p
L4013 33nH
R4020 1.2K
Q4002
BFG540W
C4018 2.7
C4019 8pF
C4027 18p
L4033 18nH
R4019 100K
C4098 10pF
L4020 18nH
R4018 100K
C4040 12pF
C4097 10pF
C4039 30pF
C4099 10pF
C4023 0
C4048 8p
C4052 20p
C4054 22p
L4017 47nH
L4018 47nH
C4049 8p
C4053 10p
9V1A_RX
L4019
BLM18PG600SN1
C4055 1000p
C4056 1u
R4022 100
R4023 150
C4058 NC
R4024 3.3K
L4021 68nH
R4025 1.2k
C4062 1000p
C4059 3p
C4060 6p
C4061 NC
L4022 39nH
L4023 33nH
L4024 33nH
C4095 1000pF
R4042 0
C4066 100p
TP4003
RX_LO
TP4004
GND
TP4008
GND
TP4009
MIXER_IN
C4094 1000pF
R4041 2.7k
R4043 0
R4027 68
[2] RX_LO
C4063 0.1u
R4029 100
R4030 100
L4025 NC
C4064 0
R4028 1.2k
C4067 220p
C4065 10p
R4031 330
Q4003
BFG540W
C4068 8p
C4072 18p
C4069 15p
C4070 7p
C4071 NC
C4073 NC
T4001
4BLH
SMS3940-029LF
D4007
T4002
4BLH
R4026 51
L4026 47nH
C4074 270p
5VA_RXIF
L4027
BLM18PG600SN1
C4075 0.1uF
R4032 5.1K
R4034 51
C4076 0.1u
R4033 1.2K
C4077 0.1u
R4035 330
C4079 0.1u
R4036 4.7K
C4087 0.1u
R4038 20K
Q4005
PBR941
L4028 0.1uF
C4082 0.1uF
[5] IF_OUT
C4088 NC
C4083 NC
C4089 NC
Q4004
PBR941
R4037 30k
C4086 0.1u
L4030 820n
R4039 30k
C4092 6P
C4093 NC
D4008 NC
R4040 56K
C4080 NC
L4031 0
C4081 0.1u
TP4005
GND
TX TP
TP4006
L4032 0
C4084 5pF
C4078 18pF
Z4001
44.85MHz
C4090 27pF
L4029 470nH
TX TP
TP4007
TP4010
GND
C4091 NC
C4085 0.01u


IF
TP5002
GND
TP5001
IF
C5001
0.01u
[4] IF_OUT
0
L5001
C5003
NC
C5004
0.01u
TP5003
2FLO
C5002
47p
L5002
601S
L5004
601S
L5003
601S
R5001
0
R5002
51
C5005
0.1u
C5006
1u
C5007
220P
TP5004
CV2
R5022
1.2k
C5008
470p
C5009
0.1u
C5010
0.1u
C5014
0.1u
C5011
0.1u
L5006
10u
L5007
10u
C5016
180p
C5012 1000p
C5013
NC
R5003
1.2k
L5005
6.8uH
R5004
1.8k
C5015
0.033uF
C5017
0.33uF
C5018
1u
C5019
470p
Q5001
2SC4617
5VA_RX
R5007
4.7k
C5026
10u/10V
C5027
470p
R5005
10k
R5006
330
Q5002
2SC3356
C5025
0.01u
C5032
27p
C5029
47p
R5011
8.2k
C5033
56p
R5013
330
L5013
470nH
C5023
39p
C5024
39p
C5031
6p
L5009
390n(HQ)
D5001
1SV305
3V3D
L5010
601S
C5035
1u
C5036
0.1u
C5037
0.1u
L5012
601S
C5021
100p
C5022
100p
C5028
1000p
C5030
0.1u
L5008
601S
C5034
0.01u
C5039
100p
C5040
100p
R5014
100k
L5011
601S
C5038
0.1u
601S
L5014
3V3A_RX
C5041
10u/10v
C5043
0.1u
R5016
1.8k
C5044
0.1u
C5045
0.1u
模拟地和数字地问题
U5001
AD9864
MXOP
MXON
GNDF
IF2N
IF2P
VDDF
GCP
GCN
VDDA
GNDA
VREFP
VREFN
GNDL
FREF
GNDS
SYNCB
GNDH
FS
DOUTB
DOUTA
CLKOUT
VDDH
VDDD
PE
PowerPAD
98_FS1
98_DOUTB1
98_DOUTA1
98_CLKOUT1
R5008 10K
R5009 33
R5010 33
R5012 33
98_FS [11]
98_DOUTA [11]
98_CLKOUT [11]
98_PE1
98_PD1
98_PC1
R5015 33
R5017 33
R5018 33
98_PE [11]
98_PD [11]
98_PC [11]
C5042
39P
L5015
0.56uH
C5046
10p
C5047
10p
19.2M_OUT_IF [10]
From OMAP
TP5005
18M
C5048
22P
L5016 3.3u
C5049
0.1uF
R5020 5.6k
C5050
30p
C5051
0.1u
R5021
510
D5002
1SV325
C5059
1uF
98_DOUTB1
R5019 33
98_FS1
98_DOUTB [11]
98_DOUTA1
98_CLKOUT1
98_PE1
98_PD1
98_PC1
C5052
100p
C5053
NC
C5054
100p
C5055
100p
C5056
100p
C5057
100p
C5058
100p

12. Parts List

No.	Ref No.	Print No.	Part No.	Description
1	C1000	T4H	3104994750060	4.7uF
2	C1001	T4H	3101051520000	1500PF
3	C1002	T4H	3101051520000	1500PF
4	C1003	T4H	3101051050160	1uF
5	C1004	B5G	3101051500020	15PF
6	C1005	B5H	3101050600010	6PF
7	C1006	B5H	3101050300000	3PF
8	C1007	B5H	3101050600010	6PF
9	C1008	T5H	3101051040010	0.1UF
10	C1009	T4H	3101051020010	1000PF
11	C1010	T4H	3101051030020	0.01UF
12	C1011	B5H	3101053000010	30PF
13	C1012	B5H	3101053000010	30PF
14	C1013	B5H	3101053000010	30PF
15	C1014	T5H	3101051040010	0.1UF
16	C1015	T5H	3101051010030	100PF
17	C1016	T4H	3101051010030	100PF
18	C1017	T4H	3101051040010	0.1UF
19	C1018	T4H	3101051020010	1000PF
20	C1019	T4H	3101051520000	1500PF
21	C1022	T5H	3101051040010	0.1UF
22	C1023	T4H	3101051010030	100PF
23	C1024	T4H	3101066830000	68000PF
24	C1025	T4H	3101061230000	0.012UF
25	C1026	T4H	3101062730050	0.027UF
26	C1028	T5H	3101051010030	100PF
27	C1029	T5H	3101051010030	100PF
28	C1030	T4H	3101061040020	0.1UF
29	C1032	T5H	3101051020010	1000PF
30	C1033	T4H	3101051520000	1500PF
31	C1034	T4H	3101051020010	1000PF
32	C1035	T5H	3101051000020	10PF
33	C1037	T4G	3104991060060	10uF
34	C1038	T4I	3101051040010	0.1UF
35	C1039	T4G	3101051040010	0.1UF
36	C1040	T4I	3101051020010	1000PF
37	C1043	T5F	3101053310030	330PF
38	C1044	T5G	3101053300000	33PF
39	C1045	T5F	3101053320010	3300PF
40	C1046	T5H	3101051010030	100PF

No.	Ref No.	Print No.	Part No.	Description
41	C1047	T5H	3101051510000	150PF
42	C1049	T4H	3101051020010	1000PF
43	C1050	T4H	3101051040010	0.1UF
44	C1053	T4H	3101051020010	1000PF
45	C1054	T9B	3101051020010	1000PF
46	C1057	T4H	3101051040010	0.1UF
47	C1058	T9B	3101051040010	0.1UF
48	C1060	T4H	3110071040000	0.1UF
49	C1061	T4H	3110071040000	0.1UF
50	C1063	T4H	3110071040000	0.1UF
51	C1064	T4H	3110071040000	0.1UF
52	C1065	T4H	3110071040000	0.1UF
53	C1066	T4H	3110071040000	0.1UF
54	C1067	T4H	3110071040000	0.1UF
55	C1069	T4H	3110071040000	0.1UF
56	C1070	T4H	3110071040000	0.1UF
57	C1071	T4H	3110071040000	0.1UF
58	C1072	T4H	3110071040000	0.1UF
59	C1077	T4H	3101051020010	1000PF
60	C1078	T9B	3101051520000	1500PF
61	C1079	T9B	3101051040010	0.1UF
62	C1080	B9C	3101051500020	15PF
63	C1081	B8C	3101050400010	4PF
64	C1082	B8C	3101050200010	2PF
65	C1083	B8B	3101050400010	4PF
66	C1085	T8B	3101051040010	0.1UF
67	C1086	T4I	3101051020010	1000PF
68	C1088	T8B	3101051030020	0.01UF
69	C1089	B8C	3101052000020	20PF
70	C1090	T9A	3101051020010	1000PF
71	C1091	B8C	3101052000020	20PF
72	C1092	T8B	3101051040010	0.1UF
73	C1093	T8B	3101051010030	100PF
74	C1094	T9B	3101051040010	0.1UF
75	C1095	T9B	3101051010030	100PF
76	C1096	T9B	3101051020010	1000PF
77	C1097	T9B	3101051520000	1500PF
78	C1098	T8B	3101051040010	0.1UF
79	C1099	T9B	3101061040020	0.1UF
80	C1100	T9B	3101066830000	68000PF
81	C1101	T9B	3101061230000	0.012UF
82	C1102	T9B	3101062730050	0.027UF

No.	Ref No.	Print No.	Part No.	Description
83	C1103	T9B	3101051020010	1000PF
84	C1104	T8B	3101051010030	100PF
85	C1105	T8B	3101051010030	100PF
86	C1106	T8B	3101051010030	100PF
87	C1107	T8B	3101051020010	1000PF
88	C1108	T8B	3101051520000	1500PF
89	C1110	T8B	3101051000020	10PF
90	C1112	T9C	3104991060060	10uF
91	C1113	T9B	3101051020010	1000PF
92	C1114	T9C	3101051040010	0.1UF
93	C1115	T9B	3101051040010	0.1UF
94	C1116	T9B	3101051020010	1000PF
95	C1119	T8B	3101051010030	100PF
96	C1120	T8B	3101051510000	150PF
97	C1122	T9B	3101051020010	1000PF
98	C1127	T9A	3101051520000	1500PF
99	C1128	T9A	3101051040010	0.1UF
100	C1129	T9B	3110071040000	0.1UF
101	C1130	T9B	3110071040000	0.1UF
102	C1131	T9B	3110071040000	0.1UF
103	C1132	T9B	3110071040000	0.1UF
104	C1133	T9B	3110071040000	0.1UF
105	C1134	T9B	3110071040000	0.1UF
106	C1136	T9B	3110071040000	0.1UF
107	C1138	T9B	3110071040000	0.1UF
108	C1139	T9B	3110071040000	0.1UF
109	C1140	T9B	3110071040000	0.1UF
110	C1141	T9B	3110071040000	0.1UF
111	C2000	B4H	3101051520000	1500PF
112	C2001	B4H	3101051040010	0.1UF
113	C2002	B4I	3101051040010	0.1UF
114	C2003	B4I	3101051520000	1500PF
115	C2004	B4H	3101051520000	1500PF
116	C2006	B4G	3101054710010	470PF
117	C2007	B4H	3101060600010	6PF
118	C2008	B4G	3101054710010	470PF
119	C2009	B4H	3101051000020	10PF
120	C2010	B4H	3101051200020	12PF
121	C2011	B4G	3104994750060	4.7uF
122	C2012	B5G	3101051040010	0.1UF
123	C2013	B4H	3101051100010	11PF
124	C2014	B4H	3101051200020	12PF

No.	Ref No.	Print No.	Part No.	Description
125	C2015	B4H	3101055600000	56PF
126	C2017	B4H	3101051520000	1500PF
127	C2018	B4H	3101060100010	1PF
128	C2019	B4H	3101051210000	120PF
129	C2020	B4H	3101060400010	4PF
130	C2021	B4H	3101054700010	47PF
131	C2022	T4G	3101051520000	1500PF
132	C2023	T4G	3101051040010	0.1UF
133	C2024	B4G	3101051040010	0.1UF
134	C2027	T5G	3101051040010	0.1UF
135	C2028	T4G	3101051520000	1500PF
136	C2029	T5G	3101051520000	1500PF
137	C2030	T4G	3101050800000	8PF
138	C2031	T4G	3101050800000	8PF
139	C2032	T4G	3101051520000	1500PF
140	C2033	T5G	3101051040010	0.1UF
141	C2035	T4G	3101052200010	22PF
142	C2036	T4G	3101052200010	22PF
143	C2037	T4G	3101050400010	4PF
144	C2038	T4G	3101050600010	6PF
145	C2039	B4H	3101051040010	0.1UF
146	C2041	T4G	3101050600010	6PF
147	C2042	T4G	3101052200010	22PF
148	C2043	T4G	3101062200010	22PF
149	C2046	T4G	3101050200010	2PF
150	C2047	B4H	3101074750000	4.7UF
151	C2048	B5G	3101051520000	1500PF
152	C2049	B5G	3101051040010	0.1UF
153	C2050	T5G	3101052200010	22PF
154	C2051	T5G	3101051040010	0.1UF
155	C2053	T4G	3101062250000	2.2UF
156	C2054	B4H	3101051040010	0.1UF
157	C2057	B4G	3101051520000	1500PF
158	C2058	B4G	3101051040010	0.1UF
159	C2059	B4G	3101051520000	1500PF
160	C2061	B4H	3101060600010	6PF
161	C2062	B4G	3101060100010	1PF
162	C2063	B4G	3101051000020	10PF
163	C2064	B4G	3101050900000	9PF
164	C2066	B4G	3101051000020	10PF
165	C2067	B4G	3101055600000	56PF
166	C2068	B4G	3101051010030	100PF

No.	Ref No.	Print No.	Part No.	Description
167	C2069	B4H	3101051520000	1500PF
168	C2071	B4G	3101063690000	3.6PF
169	C2072	B4G	3101054700010	47PF
170	C2073	B9B	3101051520000	1500PF
171	C2074	B9B	3101051040010	0.1UF
172	C2075	B8B	3101054710010	470PF
173	C2076	B8B	3101054710010	470PF
174	C2077	B9B	3101051520000	1500PF
175	C2078	B9B	3101051040010	0.1UF
176	C2079	B8B	3104994750060	4.7uF
177	C2080	B9B	3101051520000	1500PF
178	C2081	B9B	3101051520000	1500PF
179	C2082	B9B	3101051040010	0.1UF
180	C2083	B9C	3101060600010	6PF
181	C2084	B9C	3101051200020	12PF
182	C2086	B8B	3101051040010	0.1UF
183	C2087	B9B	3101052200010	22PF
184	C2088	B9B	3101051200020	12PF
185	C2089	B9B	3101053900000	39PF
186	C2090	B9C	3101051520000	1500PF
187	C2091	B9B	3101060700020	7PF
188	C2092	B9B	3101060900010	9PF
189	C2093	B9C	3101051210000	120PF
190	C2094	B9C	3101053300000	33PF
191	C2095	T9C	3101051520000	1500PF
192	C2096	T9C	3101051040010	0.1UF
193	C2097	T8C	3101050500010	5PF
194	C2098	T8C	3101050500010	5PF
195	C2099	B8C	3101051520000	1500PF
196	C2100	T9C	3101053300000	33PF
197	C2101	B8C	3101051040010	0.1UF
198	C2102	T8C	3101053300000	33PF
199	C2103	T9C	3101053300000	33PF
200	C2104	T9C	3101053300000	33PF
201	C2105	B9C	3101051520000	1500PF
202	C2106	T9D	3101053690000	3.6PF
203	C2107	T8D	3101050700010	7PF
204	C2108	T8D	3101050500010	5PF
205	C2109	T9C	3101053300000	33PF
206	C2110	B9C	3101051040010	0.1UF
207	C2111	B9C	3101051520000	1500PF
208	C2112	B9C	3101060800010	8PF

No.	Ref No.	Print No.	Part No.	Description
209	C2114	B9C	3101051000020	10PF
210	C2115	B9C	3101050700010	7PF
211	C2119	B9C	3101051000020	10PF
212	C2121	B9C	3101051000020	10PF
213	C2122	B9C	3101060600010	6PF
214	C2123	B9C	3101053900000	39PF
215	C2124	B9C	3101051520000	1500PF
216	C2125	B9C	3101058200000	82PF
217	C2126	B9C	3101063690000	3.6PF
218	C2127	B9C	3101053300000	33PF
219	C2128	T9C	3101051520000	1500PF
220	C2129	T9C	3101051520000	1500PF
221	C2130	B9B	3101051520000	1500PF
222	C2131	B9B	3101051040010	0.1UF
223	C2132	B9A	3101051040010	0.1UF
224	C2133	B9C	3101050590020	0.5PF
225	C2134	B9C	3101050590020	0.5PF
226	C2135	B9B	3101050590020	0.5PF
227	C2136	B9C	3101050590020	0.5PF
228	C2137	B9B	3101051520000	1500PF
229	C2138	B9B	3101051520000	1500PF
230	C2139	B9B	3101051040010	0.1UF
231	C2140	B5G	3101051520000	1500PF
232	C2141	B5G	3101051040010	0.1UF
233	C2142	B4G	3101051040010	0.1UF
234	C2143	B4G	3101051520000	1500PF
235	C2149	T9C	3101051520000	1500PF
236	C2150	T9C	3101051040010	0.1UF
237	C2151	B9A	3101054710010	470PF
238	C2152	B9B	3101054710010	470PF
239	C2153	B9B	3104991050050	1uF
240	C2157	T9C	3101062250000	2.2UF
241	C2158	T9C	3101051040010	0.1UF
242	C2159	T9C	3101051040010	0.1UF
243	C2160	T8C	3101051040010	0.1UF
244	C2161	T9D	3101054790060	4.7PF
245	C3014	T2C	3101061540000	0.15UF
246	C3015	T2C	3101061220000	1200PF
247	C3016	T2C	3101061040020	0.1UF
248	C3017	T2C	3101064700000	47PF
249	C3018	T2C	3101081020010	1000pF
250	C3019	T2C	3101084710010	470pF

No.	Ref No.	Print No.	Part No.	Description
251	C3020	T2B	3101083900010	39pF
252	C3021	T2B	3101061010010	100PF
253	C3022	T2B	3101064710000	470PF
254	C3023	T2C	3101061220000	1200PF
255	C3024	T2B	3101092260010	22UF
256	C3025	T2B	3101063320000	3300PF
257	C3026	T2B	3101061830000	0.018UF
258	C3027	T2B	3101063300000	33PF
259	C3028	T2B	3101061220000	1200PF
260	C3029	T2B	3101063320000	3300PF
261	C3030	T2C	3101062210000	220PF
262	C3031	T2B	3101081020010	1000pF
263	C3032	T2B	3101063320000	3300PF
264	C3033	T2B	3101066800000	68PF
265	C3034	T2E	3101375690000	5.6pF
266	C3035	T2F	3101376890000	6.8pF
267	C3038	T1D	3101371010000	100pF
268	C3040	T2D	3101378290000	8.2pF
269	C3041	T2C	3101371210000	120pF
270	C3043	T2E	3101371010000	100pF
271	C3044	T2G	3101371010000	100pF
272	C3046	T2D	3101371210000	120pF
273	C3048	T1D	3101373900000	39pF
274	C3051	T2E	3101371500000	15pF
275	C3052	T1E	3101992700000	27pF
276	C3055	T1C	3101371010000	100pF
277	C3056	T1F	3101372000000	20pF
278	C3058	T2D	3101371210000	120pF
279	C3060	T2G	3101061020000	1000PF
280	C3061	T1H	3101061020000	1000PF
281	C3063	T1H	3101061500010	15PF
282	C3065	T3C	3101064740000	0.47UF
283	C3066	T1G	3101051020010	1000PF
284	C3068	T3C	3101066830050	0.068UF
285	C3069	T3C	3101074730000	0.047UF
286	C3071	T3C	3101062200010	22PF
287	C3072	T2G	3101051020010	1000PF
288	C3073	T5E	3101061040020	0.1UF
289	C3074	T4E	3101081060010	10UF
290	C3075	T5E	3101061010010	100PF
291	C3076	T4E	3101061020000	1000PF
292	C3079	T4D	3101061040020	0.1UF

No.	Ref No.	Print No.	Part No.	Description
293	C3080	T4F	3101061020000	1000PF
294	C3082	T3G	3101061040020	0.1UF
295	C3083	T4D	3101062210000	220PF
296	C3084	T3G	3101053930000	0.039UF
297	C3085	T4F	3101061040020	0.1UF
298	C3086	T3G	3101051510000	150PF
299	C3088	T4F	3101061520010	1500PF
300	C3089	T2G	3101052210010	220PF
301	C3090	T3D	3101061010010	100PF
302	C3091	T4F	3101061520010	1500PF
303	C3095	T1G	3101052210010	220PF
304	C3096	T3E	3101064710000	470PF
305	C3097	T4E	3101066800000	68PF
306	C3099	T2G	3101052210010	220PF
307	C3102	T4E	3101062700010	27PF
308	C3103	T4F	3101061010010	100PF
309	C3104	T4F	3101054710010	470PF
310	C3106	T3E	3101061020000	1000PF
311	C3108	T3H	3001053330010	33KΩ
312	C3109	T2H	3101052210010	220PF
313	C3113	T3G	3101052210010	220PF
314	C3114	T3H	3101052210010	220PF
315	C3115	T3H	3101061040020	0.1UF
316	C3116	T3H	3001051830000	18KΩ
317	C3118	T3C	3210306220000	22nH
318	C3120	T2G	3101061040020	0.1UF
319	C3121	T2G	3101052210010	220PF
320	C3122	T3D	3101062710000	270PF
321	C3123	T2D	3101052210010	220PF
322	C3127	T4E	3101062000000	20PF
323	C4001	T9F	3101052210010	220PF
324	C4002	T9G	3101051040010	0.1UF
325	C4003	T9G	3101051520000	1500PF
326	C4004	T9F	3101061050020	1UF
327	C4005	T9G	3101051520000	1500PF
328	C4006	T9G	3101052210010	220PF
329	C4007	T9F	3101051020010	1000PF
330	C4008	T9H	3101051520000	1500PF
331	C4009	T9G	3101051040010	0.1UF
332	C4010	T9G	3101051520000	1500PF
333	C4014	T9G	3101051520000	1500PF
334	C4017	T8G	3101051040010	0.1UF

No.	Ref No.	Print No.	Part No.	Description
335	C4018	T8G	3001052790000	2.7Ω
336	C4019	T8G	3101050800000	8PF
337	C4023	T9F	3001050000000	0Ω
338	C4027	T8G	3101051800010	18PF
339	C4030	T8H	3001050000000	0Ω
340	C4031	T8H	3101051500020	15PF
341	C4032	T8H	3101051200020	12PF
342	C4033	T8H	3101051010030	100PF
343	C4034	T8H	3001050000000	0Ω
344	C4037	T8G	3001050000000	0Ω
345	C4038	T8G	3101053300000	33PF
346	C4039	T9F	3101053000010	30PF
347	C4040	T8F	3101051200020	12PF
348	C4041	T9I	3101054700010	47PF
349	C4042	T8H	3101051800010	18PF
350	C4043	T8H	3101051200020	12PF
351	C4044	T9H	3101051800010	18PF
352	C4045	T9I	3101054700010	47PF
353	C4046	T8H	3101051000020	10PF
354	C4047	T8H	3101051000020	10PF
355	C4048	T9F	3101050800000	8PF
356	C4049	T9F	3101050800000	8PF
357	C4050	T9G	3101060500010	5PF
358	C4052	T9F	3101052000020	20PF
359	C4053	T9F	3101051000020	10PF
360	C4054	T9F	3101052200010	22PF
361	C4055	B9E	3101051020010	1000PF
362	C4056	B9E	3101061050020	1UF
363	C4057	T9G	3101051050160	1uF
364	C4059	B9E	3101050300000	3PF
365	C4060	B9E	3101050600010	6PF
366	C4062	B9D	3101051020010	1000PF
367	C4063	B9D	3101061040020	0.1UF
368	C4064	B9D	3001060000000	0Ω
369	C4065	B9E	3101051000020	10PF
370	C4066	B9F	3101051010030	100PF
371	C4067	B9E	3101052210010	220PF
372	C4068	B9E	3101050800000	8PF
373	C4069	B9E	3101051500020	15PF
374	C4070	B9E	3101050700010	7PF
375	C4072	B9E	3101051800010	18PF
376	C4074	B9F	3101052710000	270PF

No.	Ref No.	Print No.	Part No.	Description
377	C4075	T9E	3101061040020	0.1UF
378	C4076	T9D	3101051040010	0.1UF
379	C4077	T9E	3101051040010	0.1UF
380	C4078	T9E	3101051800010	18PF
381	C4079	T9E	3101051040010	0.1UF
382	C4081	T9E	3101051040010	0.1UF
383	C4082	T9D	3101051040010	0.1UF
384	C4084	T9E	3101060500010	5PF
385	C4085	B9F	3101051030020	0.01UF
386	C4086	T9D	3101051040010	0.1UF
387	C4087	T9D	3101051040010	0.1UF
388	C4090	B9F	3101062700010	27PF
389	C4092	T9D	3101050600010	6PF
390	C4094	T9F	3101051020010	1000PF
391	C4095	B9E	3101051020010	1000PF
392	C4096	T9G	3101081060010	10UF
393	C4097	T8F	3101051000020	10PF
394	C4098	T8F	3101051000020	10PF
395	C4099	T9F	3101051000020	10PF
396	C5001	T8E	3101051030020	0.01UF
397	C5002	T8E	3101054700010	47PF
398	C5004	T8E	3101051030020	0.01UF
399	C5005	T8D	3101051040010	0.1UF
400	C5006	T8D	3101061050020	1UF
401	C5007	T8D	3101052210010	220PF
402	C5008	T8E	3101054710010	470PF
403	C5009	T8E	3101051040010	0.1UF
404	C5010	T8E	3101051040010	0.1UF
405	C5011	T8E	3101051040010	0.1UF
406	C5012	T8E	3101051020010	1000PF
407	C5014	T8E	3101051040010	0.1UF
408	C5015	T8D	3101053330000	0.033UF
409	C5016	T8E	3101061810060	180PF
410	C5017	T8D	3101063340000	0.33UF
411	C5018	B8D	3101051050160	1uF
412	C5019	B8E	3101054710010	470PF
413	C5020	T8D	3101051040010	0.1UF
414	C5021	T8E	3101051010030	100PF
415	C5022	T8E	3101051010030	100PF
416	C5023	B8D	3101053900000	39PF
417	C5024	B8D	3101053900000	39PF
418	C5025	B8E	3101051030020	0.01UF

No.	Ref No.	Print No.	Part No.	Description
419	C5026	B8E	3104991060060	10uF
420	C5027	B8E	3101054710010	470PF
421	C5028	T8E	3101051020010	1000PF
422	C5029	B8E	3101054700010	47PF
423	C5030	T8E	3101051040010	0.1UF
424	C5031	B8D	3101050600010	6PF
425	C5032	B8E	3101052700000	27PF
426	C5033	B8E	3101055600000	56PF
427	C5034	T8E	3101051030020	0.01UF
428	C5035	T8D	3101051050160	1uF
429	C5036	T8D	3101051040010	0.1UF
430	C5037	T8D	3101051040010	0.1UF
431	C5038	T8E	3101051040010	0.1UF
432	C5039	T8E	3101051010030	100PF
433	C5040	T8E	3101051010030	100PF
434	C5041	T8E	3104991060060	10uF
435	C5042	T8D	3101053900000	39PF
436	C5043	T8E	3101051040010	0.1UF
437	C5044	T8E	3101051040010	0.1UF
438	C5045	T8E	3101051040010	0.1UF
439	C5046	T8D	3101051000020	10PF
440	C5047	T8D	3101051000020	10PF
441	C5048	B8D	3101052200010	22PF
442	C5049	B8E	3101051040010	0.1UF
443	C5050	B8D	3101053000010	30PF
444	C5051	B8E	3101061040020	0.1UF
445	C5052	T8D	3101051010030	100PF
446	C5054	T8D	3101051010030	100PF
447	C5055	T8D	3101051010030	100PF
448	C5056	T8D	3101051010030	100PF
449	C5057	T8D	3101051010030	100PF
450	C5058	T8E	3101051010030	100PF
451	C5059	B8E	3101071050010	1UF
452	C6001	B7C	3101061050020	1UF
453	C6002	T6B	3101051030020	0.01UF
454	C6003	T6B	3101051020010	1000PF
455	C6004	T7C	3110992270000	220UF
456	C6005	T7C	3101082260020	22UF
457	C6006	T7B	3101092260010	22UF
458	C6007	T7C	3101051040010	0.1UF
459	C6008	T7B	3101092260010	22UF
460	C6009	T6B	3101068220000	8200PF

No.	Ref No.	Print No.	Part No.	Description
461	C6010	T6B	3101061040110	0.1uF
462	C6011	T6B	3101068220000	8200PF
463	C6012	T6B	3101051020010	1000PF
464	C6013	B6B	3101062250000	2.2UF
465	C6014	T7B	3101061040110	0.1uF
466	C6015	B7B	3101051040010	0.1UF
467	C6016	B7C	3101071060000	10UF
468	C6017	T5A	3101061040110	0.1uF
469	C6018	T5A	3101054710010	470PF
470	C6019	B7B	3101082260020	22UF
471	C6020	B6B	3101051030020	0.01UF
472	C6021	B6B	3101061050020	1UF
473	C6022	B5F	3101051040010	0.1UF
474	C6023	B7B	3101071060000	10UF
475	C6024	B6B	3101061050020	1UF
476	C6025	B6B	3101051030020	0.01UF
477	C6026	B6C	3101082260020	22UF
478	C6027	B6C	3101051040010	0.1UF
479	C6028	B6C	3101061050020	1UF
480	C6029	B6C	3101051030020	0.01UF
481	C6031	T8A	3101061040110	0.1uF
482	C6032	T7A	3101051020010	1000PF
483	C6033	B7C	3101082260020	22UF
484	C6034	B7C	3101051040010	0.1UF
485	C6035	B7C	3101061050020	1UF
486	C6036	B7C	3101051030020	0.01UF
487	C6037	T5E	3101081060010	10UF
488	C6038	T4E	3101051020010	1000PF
489	C6039	T4D	3101061040110	0.1uF
490	C6040	T4D	3101081060010	10UF
491	C6041	B6F	3101051040010	0.1UF
492	C6042	T5E	3101051040010	0.1UF
493	C6043	T5E	3101081060010	10UF
494	C6044	B6B	3101051040010	0.1UF
495	C6045	T8C	3101062250000	2.2UF
496	C6046	T8C	3101062250000	2.2UF
497	C6047	T8C	3101051040010	0.1UF
498	C6048	T8C	3101052210010	220PF
499	C6049	T8C	3101051040010	0.1UF
500	C6052	T8B	3101051020010	1000PF
501	C6053	T8B	3101081060010	10UF
502	C6054	T8C	3101051020010	1000PF

No.	Ref No.	Print No.	Part No.	Description
503	C6055	T8C	3101062250000	2.2UF
504	C6056	T5E	3101051040010	0.1UF
505	C6057	T8B	3101051040010	0.1UF
506	C6058	T8B	3101081060010	10UF
507	C6059	T7C	3101051040010	0.1UF
508	C6060	T8B	3101051040010	0.1UF
509	C6061	T8C	3101081060010	10UF
510	C6065	T5E	3101081060010	10UF
511	C6067	T5F	3101062250000	2.2UF
512	C6068	T4F	3101062250000	2.2UF
513	C6069	T4F	3101051040010	0.1UF
514	C6070	T4F	3101052210010	220PF
515	C6071	T5F	3101051040010	0.1UF
516	C6074	T5F	3101051020010	1000PF
517	C6075	T5F	3101051040010	0.1UF
518	C6078	T5A	3101053300000	33PF
519	C6080	T8C	3101062250000	2.2UF
520	C6081	T5F	3101062250000	2.2UF
521	C6082	T8C	3101051040010	0.1UF
522	C6086	T5F	3101051040010	0.1UF
523	C6087	T4D	3101081060010	10UF
524	C6088	T5B	3103993370000	330UF
525	C6089	T4B	3101068220000	8200PF
526	C6090	T4C	3101051040010	0.1UF
527	C6091	T4C	3101051010030	100PF
528	C6093	T4B	3101061040110	0.1uF
529	C6094	T4B	3101051030020	0.01UF
530	C6095	T4B	3101092260010	22UF
531	C6096	T4B	3101092260010	22UF
532	C6097	T4B	3101061040110	0.1uF
533	C6098	T4B	3101068220000	8200PF
534	C6099	T8G	3101081060010	10UF
535	C6100	T8H	3101051040010	0.1UF
536	C6101	T4C	3104991070090	100UF
537	C6102	T8H	3101051020010	1000PF
538	C6105	T5E	3101051010030	100PF
539	C6106	B5B	3103993370000	330UF
540	C6107	T8H	3101051040010	0.1UF
541	C6109	B6B	3101062250000	2.2UF
542	C6110	B6B	3101052210010	220PF
543	C6111	T8H	3101062250000	2.2UF
544	C6112	T8H	3101051020010	1000PF

No.	Ref No.	Print No.	Part No.	Description
545	C6113	B5C	3103993370000	330UF
546	C6114	T5B	3101064720000	4700PF
547	C6115	T8H	3101052210010	220PF
548	C6116	T8H	3101062250000	2.2UF
549	C6117	T8H	3101062250000	2.2UF
550	C6118	B4C	3101051010030	100PF
551	C6119	B4B	3101064710000	470PF
552	C6120	T5B	3101061510050	150PF
553	C6129	B5C	3101061040110	0.1uF
554	C7001	B6G	3101051040010	0.1UF
555	C7006	B6G	3101082260020	22UF
556	C7007	B5G	3101061050020	1UF
557	C7008	B5G	3101051040010	0.1UF
558	C7009	B5G	3101051010030	100PF
559	C7010	B6H	3101051040010	0.1UF
560	C7011	B6H	3101051040010	0.1UF
561	C7012	B6H	3101051040010	0.1UF
562	C7013	B6H	3101051040010	0.1UF
563	C7014	B6G	3101051040010	0.1UF
564	C7015	B6G	3101051040010	0.1UF
565	C7016	T6G	3101051010030	100PF
566	C7017	T6F	3101051010030	100PF
567	C7018	T6F	3101051010030	100PF
568	C7019	T6H	3101051010030	100PF
569	C7020	T6H	3101051010030	100PF
570	C7021	T6G	3101051010030	100PF
571	C7022	T6F	3101051010030	100PF
572	C7023	T6H	3101051010030	100PF
573	C7024	T6H	3101051010030	100PF
574	C7025	B6G	3101054700010	47PF
575	C7026	T7E	3101051030020	0.01UF
576	C7027	B7E	3101081060010	10UF
577	C7028	T7E	3101051040010	0.1UF
578	C7029	B6G	3101054700010	47PF
579	C7030	T7E	3101053900000	39PF
580	C7031	T7E	3101051030020	0.01UF
581	C7032	T6F	3101051030020	0.01UF
582	C7033	T7E	3101058200000	82PF
583	C7034	T7E	3101058200000	82PF
584	C7035	T7E	3101058200000	82PF
585	C7036	T6F	3101051200020	12PF
586	C7037	T6F	3101054700010	47PF

No.	Ref No.	Print No.	Part No.	Description
587	C7038	T7E	3101061050020	1UF
588	C7039	T6F	3101051200020	12PF
589	C7041	B6G	3101051010030	100PF
590	C7042	B6G	3101051040010	0.1UF
591	C7043	B6G	3101051030020	0.01UF
592	C7044	B6G	3101082260020	22UF
593	C7045	B6G	3101051040010	0.1UF
594	C7046	B6G	3101051040010	0.1UF
595	C7047	B6G	3101051040010	0.1UF
596	C7048	B6G	3101051040010	0.1UF
597	C7049	B6G	3101051040010	0.1UF
598	C7050	B6G	3101051040010	0.1UF
599	C7051	B6G	3101051040010	0.1UF
600	C7052	B6G	3101054700010	47PF
601	C7058	T6G	3101051010030	100PF
602	C7059	B6G	3101051040010	0.1UF
603	C7062	B6E	3101051040010	0.1UF
604	C7063	B6E	3101051040010	0.1UF
605	C7064	B6E	3101051030020	0.01UF
606	C7065	B6E	3101051010030	100PF
607	C7066	T6F	3101051040010	0.1UF
608	C7067	T6F	3101051010030	100PF
609	C7068	B6G	3101051040010	0.1UF
610	C7069	B6G	3101051040010	0.1UF
611	C7070	B6G	3101051040010	0.1UF
612	C7071	B6G	3101051040010	0.1UF
613	C7072	B6G	3101051040010	0.1UF
614	C7077	B6G	3101051010030	100PF
615	C7078	B6G	3101051040010	0.1UF
616	C7079	B6G	3101051030020	0.01UF
617	C7080	B6G	3101082260020	22UF
618	C7081	B6G	3101061050020	1UF
619	C7082	T6I	3101051040010	0.1UF
620	C7087	T5D	3101082260020	22UF
621	C7088	T5D	3101061050020	1UF
622	C7089	B6D	3101051040010	0.1UF
623	C7090	B6D	3101051010030	100PF
624	C7091	B6E	3101051040010	0.1UF
625	C7092	B6E	3101051010030	100PF
626	C7093	B6E	3101051040010	0.1UF
627	C7094	B6E	3101051010030	100PF
628	C7095	B6E	3101051040010	0.1UF

No.	Ref No.	Print No.	Part No.	Description
629	C7096	B6E	3101051010030	100PF
630	C7097	B6E	3101051040010	0.1UF
631	C7098	T7D	3101051010030	100PF
632	C7099	T6D	3101051010030	100PF
633	C7100	T6D	3101051010030	100PF
634	C7101	T7D	3101051010030	100PF
635	C7102	T6D	3101051010030	100PF
636	C7103	T6D	3101051010030	100PF
637	C7104	T6D	3101051010030	100PF
638	C7105	T6D	3101051010030	100PF
639	C7106	T6D	3101051010030	100PF
640	C7107	T6D	3101051010030	100PF
641	C7110	T6D	3101051010030	100PF
642	C7111	T7E	3101051010030	100PF
643	C7112	T7E	3101051010030	100PF
644	C7113	T7D	3101051010030	100PF
645	C7114	T7D	3101051010030	100PF
646	C7117	T6D	3101051200020	12PF
647	C7118	T6D	3101051200020	12PF
648	C7119	B7E	3101051040010	0.1UF
649	C7120	B7E	3101051030020	0.01UF
650	C7121	T6F	3101051000020	10PF
651	C7122	B6D	3101051040010	0.1UF
652	C7123	B6D	3101051040010	0.1UF
653	C7124	B6E	3101051040010	0.1UF
654	C7125	T7D	3101051010030	100PF
655	C7128	T8G	3101051040010	0.1UF
656	C7129	B7D	3101051000020	10PF
657	C7130	B6D	3101082260020	22UF
658	C7131	B6D	3101051040010	0.1UF
659	C7132	T6E	3101051040010	0.1UF
660	C7133	B6E	3101051040010	0.1UF
661	C7135	T7F	3101051000020	10PF
662	C7136	T7D	3101051010030	100PF
663	C7137	T6E	3101051040010	0.1UF
664	C7140	B6G	3101051040010	0.1UF
665	C7141	B6G	3101051040010	0.1UF
666	C7142	B6G	3101051030020	0.01UF
667	C7143	B6G	3101051010030	100PF
668	C7144	T7D	3101051040010	0.1UF
669	C7145	B6D	3101051040010	0.1UF
670	C7146	B7E	3101051040010	0.1UF

No.	Ref No.	Print No.	Part No.	Description
671	C7147	B6E	3101051040010	0.1UF
672	C7148	B6D	3101051040010	0.1UF
673	C7149	B6D	3101051040010	0.1UF
674	C7154	B6D	3101051010030	100PF
675	C7155	B7D	3101051040010	0.1UF
676	C7156	B7D	3101051030020	0.01UF
677	C7157	B6D	3101082260020	22UF
678	C7158	B6E	3101061050020	1UF
679	C7193	B8C	3101051010030	100PF
680	C7194	B8C	3101051010030	100PF
681	C7195	B8C	3101051010030	100PF
682	C7196	B8C	3101051040010	0.1UF
683	C7197	B8B	3101052210010	220PF
684	C7198	B8B	3101052210010	220PF
685	C7200	B8C	3101052210010	220PF
686	C7201	B8C	3101052210010	220PF
687	C7202	B8B	3101052210010	220PF
688	C7203	B8B	3101052210010	220PF
689	C7204	B7C	3101052210010	220PF
690	C7205	B7B	3101052210010	220PF
691	C7206	B7B	3101052210010	220PF
692	C7207	B7B	3101052210010	220PF
693	C7208	T8A	3101061040110	0.1uF
694	C7209	B8B	3101052210010	220PF
695	C7211	B8B	3101052210010	220PF
696	C7212	B8B	3101052210010	220PF
697	C7213	B8B	3101052210010	220PF
698	C7214	B8B	3101052210010	220PF
699	C7222	T7C	3101061040110	0.1uF
700	C7223	B6D	3101061040110	0.1uF
701	C7224	T7D	3101061040110	0.1uF
702	C7225	T7D	3101061040110	0.1uF
703	C7226	B7D	3101061040110	0.1uF
704	C7227	T7E	3101051010030	100PF
705	C7228	T7E	3101051010030	100PF
706	C7248	B8B	3101052210010	220PF
707	C7249	B7B	3101052210010	220PF
708	C7250	T6B	3101051040010	0.1UF
709	C7401	B7H	3101064730000	0.047uF
710	C7402	B7I	3101061010010	100PF
711	C7403	B7H	3101061010010	100PF
712	C7404	B7I	3101061040110	0.1uF

No.	Ref No.	Print No.	Part No.	Description
713	C7405	B7H	3101064710000	470PF
714	C7406	B7H	3101064710000	470PF
715	C7407	B7I	3101061010010	100PF
716	C7408	B7I	3101061040110	0.1uF
717	C7409	B7H	3101064710000	470PF
718	C7410	B8H	3101064710000	470PF
719	C7411	B7H	3101064710000	470PF
720	C7412	B8H	3101064710000	470PF
721	C7417	B8H	3101064710000	470PF
722	C8001	T7F	3101051030020	0.01UF
723	C8002	T5F	3101051030020	0.01UF
724	C8003	T5F	3101051010030	100PF
725	C8004	T5F	3101051010030	100PF
726	C8005	T5F	3101051010030	100PF
727	C8007	T5F	3101051040010	0.1UF
728	C8008	T5F	3101071060000	10UF
729	C8009	T5F	3101051040010	0.1UF
730	C8010	T5F	3101051020010	1000PF
731	C8011	T5F	3101051040010	0.1UF
732	C8015	T6F	3101082260020	22UF
733	C8016	T6F	3101051040010	0.1UF
734	C8017	T6F	3101051020010	1000PF
735	C8025	T6F	3101054700010	47PF
736	C8026	T6F	3101054700010	47PF
737	C8027	T6F	3101054700010	47PF
738	C8031	T7F	3101071060000	10UF
739	C8033	T7F	3101051030020	0.01UF
740	C8034	T6F	3101051040010	0.1UF
741	C8035	T7F	3101051030020	0.01UF
742	C8036	T7F	3101051030020	0.01UF
743	C8037	T7F	3101051030020	0.01UF
744	C8038	T7F	3101051040010	0.1UF
745	C8039	T7F	3101051020010	1000PF
746	C8040	T7F	3101051040010	0.1UF
747	C8042	T7G	3101071060000	10UF
748	C8043	T7G	3101051040010	0.1UF
749	C8044	T7G	3101051020010	1000PF
750	C8047	T7G	3101054700010	47PF
751	C8048	T7G	3101054700010	47PF
752	C8049	T7G	3101054700010	47PF
753	C8053	B8G	3101081060010	10UF
754	C8054	B8G	3101051040010	0.1UF

No.	Ref No.	Print No.	Part No.	Description
755	C8055	B8G	3101051040010	0.1UF
756	C8056	B7H	3101054700010	47PF
757	C8057	B8G	3101081060010	10UF
758	C8058	B8G	3101051030020	0.01UF
759	C8059	B7H	3101054700010	47PF
760	C8060	B7G	3101081060010	10UF
761	C8061	B7H	3101054700010	47PF
762	C8062	B7H	3101054700010	47PF
763	C8063	B7H	3101051040010	0.1UF
764	C8064	B8F	3101081060010	10UF
765	C8065	B7F	3101051030020	0.01UF
766	C8066	B8F	3101051040010	0.1UF
767	C8068	B7H	3101051040010	0.1UF
768	C8070	B7G	3101051040010	0.1UF
769	C8071	B7G	3101081060010	10UF
770	C8080	B7G	3101061050020	1UF
771	C8081	B7H	3101081060010	10UF
772	C8082	B7H	3101051040010	0.1UF
773	C8085	B7G	3101061050020	1UF
774	C8086	B7H	3101061050020	1UF
775	C8087	B7H	3101051040010	0.1UF
776	C8088	B7F	3101061050020	1UF
777	C8089	B7F	3101054710010	470PF
778	C8090	B7F	3101061050020	1UF
779	C8091	B7G	3101061050020	1UF
780	C8092	B7H	3101061050020	1UF
781	C8094	B7G	3101082260020	22UF
782	C8095	B7H	3101052210010	220PF
783	C8097	B7F	3101082260020	22UF
784	C8099	B7G	3101051020010	1000PF
785	C8100	B7H	3101051030020	0.01UF
786	C8101	B7H	3101051030020	0.01UF
787	C8105	B7G	3101061050020	1UF
788	C8106	B7F	3101081060010	10UF
789	C8107	B7F	3101051040010	0.1UF
790	C8110	B8H	3101081060010	10UF
791	C8113	B8H	3101051040010	0.1UF
792	C8114	B7F	3101054710010	470PF
793	C8115	B8G	3101051010030	100PF
794	C8116	B8G	3101051010030	100PF
795	C8119	B7G	3101051020010	1000PF
796	C8120	B8G	3101051040010	0.1UF

No.	Ref No.	Print No.	Part No.	Description
797	C8121	B7G	3101054710010	470PF
798	C8124	B7G	3101051020010	1000PF
799	C8125	B5D	3101051040010	0.1UF
800	C8126	T5E	3101051040010	0.1UF
801	C8127	B4E	3101051040010	0.1UF
802	C8128	B5D	3101051040010	0.1UF
803	C8129	B5D	3101051040010	0.1UF
804	C8130	B5E	3101051040010	0.1UF
805	C8131	B5D	3101051040010	0.1UF
806	C8137	T5E	3101051040010	0.1UF
807	C8138	B4E	3101051040010	0.1UF
808	C8139	T5E	3101051010030	100PF
809	C8140	B4D	3101051040010	0.1UF
810	C8141	T5D	3101051040010	0.1UF
811	C8142	B4D	3101051040010	0.1UF
812	C8143	B7H	3101054740020	0.47uF
813	C8144	B7H	3101051030020	0.01UF
814	C8145	T6B	3101301020010	1000pF
815	C8146	B5D	3101081060010	10UF
816	C8147	T5E	3101081060010	10UF
817	C8148	B5D	3101053000010	30PF
818	C8149	B5D	3101053000010	30PF
819	C8150	B4D	3101051040010	0.1UF
820	C8151	T5D	3101051010030	100PF
821	C8152	B4D	3101051040010	0.1UF
822	C8153	B5E	3101051040010	0.1UF
823	C8154	B5E	3101051040010	0.1UF
824	C8155	B4E	3101051040010	0.1UF
825	C8156	B5E	3101051040010	0.1UF
826	C8157	B5E	3101051040010	0.1UF
827	C8158	T5D	3101051040010	0.1UF
828	C8159	B5D	3101081060010	10UF
829	C8160	T5D	3101081060010	10UF
830	C8161	B5D	3101081060010	10UF
831	C8162	T5D	3101081060010	10UF
832	C8163	B4D	3101081060010	10UF
833	C8165	T5C	3101061500010	15PF
834	C8166	B5C	3101062230020	0.022UF
835	C8167	T5C	3101061500010	15PF
836	C8168	T6C	3101061500010	15PF
837	C8169	T6C	3101061500010	15PF
838	D1000	T4H	3303240000000	Switching Diode BAS16XV2T1G

No.	Ref No.	Print No.	Part No.	Description
839	D1001	T9B	3303240000000	Switching Diode BAS16XV2T1G
840	D1002	T4H	3301990000030	Schottky Barrier Diode RB520SM-30
841	D1003	T4H	3301990000030	Schottky Barrier Diode RB520SM-30
842	D1004	T4H	3301990000030	Schottky Barrier Diode RB520SM-30
843	D1005	T9A	3301990000030	Schottky Barrier Diode RB520SM-30
844	D1006	T9B	3301990000030	Schottky Barrier Diode RB520SM-30
845	D1007	T9B	3301990000030	Schottky Barrier Diode RB520SM-30
846	D2000	B4G	3303240000000	Switching Diode BAS16XV2T1G
847	D2001	B4H	3304010100220	Varactor 1SV305
848	D2002	B4H	3304010100220	Varactor 1SV305
849	D2003	B4H	3304010100220	Varactor 1SV305
850	D2004	B4H	3304010100220	Varactor 1SV305
851	D2005	B4H	3304010100890	Varactor 1SV279(TPH3.F)
852	D2006	B4G	3304010100220	Varactor 1SV305
853	D2007	B4G	3304010100220	Varactor 1SV305
854	D2008	B4G	3304010100220	Varactor 1SV305
855	D2009	B4G	3304010100220	Varactor 1SV305
856	D2010	B8B	3303240000000	Switching Diode BAS16XV2T1G
857	D2011	B9C	3304010100220	Varactor 1SV305
858	D2012	B9B	3304010100220	Varactor 1SV305
859	D2013	B9B	3304010100220	Varactor 1SV305
860	D2014	B9B	3304010100220	Varactor 1SV305
861	D2015	B9C	3304010100220	Varactor 1SV305
862	D2016	B9C	3304010100220	Varactor 1SV305
863	D2017	B9C	3304010100220	Varactor 1SV305
864	D2018	B9C	3304010100220	Varactor 1SV305
865	D2019	B9C	3304010100180	Varactor 1SV325
866	D2020	B9C	3304010100180	Varactor 1SV325
867	D2021	B9B	3304010100180	Varactor 1SV325
868	D2022	B9C	3304010100180	Varactor 1SV325
869	D2023	B9B	3303240000000	Switching Diode BAS16XV2T1G
870	D3001	T1G	3303030300000	Schottky Barrier Diode
871	D3002	T2G	3303030300000	Schottky Barrier Diode
872	D3003	T3G	3302030500030	Zener diode UDZVTE-175.1B
873	D3004	T2H	3303030100010	Switching Diode DAN222(TL)
874	D4001	T9H	3304010100390	Varactor 1SV228(TPH6.F)
875	D4002	T9H	3304010100390	Varactor 1SV228(TPH6.F)
876	D4003	T9F	3304010100390	Varactor 1SV228(TPH6.F)
877	D4004	T9F	3304010100390	Varactor 1SV228(TPH6.F)
878	D4006	T9H	3311990000410	Schottky Diode
879	D4007	B9F	3699019000000	MIX ICSMS3940-029LF
880	D5001	B8D	3304010100220	Varactor 1SV305

No.	Ref No.	Print No.	Part No.	Description
881	D5002	B8D	3304010100180	Varactor 1SV325
882	D6002	T7B	3301100300030	Rectifier Diode B340A-F
883	D6003	T7C	3310990000090	ESD Protection Diode MMBZ6V8ALT1G
884	D6004	B6B	3310240200000	ESD Protection Diode MMBZ5V6ALT1G
885	D6005	B6B	3310240200000	ESD Protection Diode MMBZ5V6ALT1G
886	D6006	T5B	3301100300030	Rectifier Diode B340A-F
887	D6007	B6B	3311240100000	Schottky Diode MBRM120LT1G
888	D6008	B7C	3310240200000	ESD Protection Diode MMBZ5V6ALT1G
889	D6009	B6F	3311240100000	Schottky Diode MBRM120LT1G
890	D6010	B4B	3303100500000	Switching Diode BAV70
891	D6014	T5A	3399100000010	TVS diode 3.0SMCJ20A
892	D6019	T7C	3311390000000	Schottky Diode PMEG6010CEJ
893	D6021	B5A	3303100500000	Switching Diode BAV70
894	D6022	B4B	3301100300030	Rectifier Diode B340A-F
895	D6025	B4B	3301100300030	Rectifier Diode B340A-F
896	D6026	B5B	3311390000000	Schottky Diode PMEG6010CEJ
897	D7005	B8B	3310240000000	ESD Protection Diode MMBZ20VALT1G
898	D7007	B8C	3310240000000	ESD Protection Diode MMBZ20VALT1G
899	D7008	B8B	3310240000000	ESD Protection Diode MMBZ20VALT1G
900	D7009	B7C	3310240000000	ESD Protection Diode MMBZ20VALT1G
901	D7010	B7B	3310240000000	ESD Protection Diode MMBZ20VALT1G
902	D7012	B8B	3310240000000	ESD Protection Diode MMBZ20VALT1G
903	D7013	B8B	3699037000010	USB Protection ICPRTR5V0U2X
904	D7014	B8B	3310990000090	ESD Protection Diode MMBZ6V8ALT1G
905	D7015	T6D	3307110100080	【MSD3】LED KPT-1608SGC
906	D7016	T7E	3307110100080	【MSD3】LED KPT-1608SGC
907	D7017	T5B	3307110100080	【MSD3】LED KPT-1608SGC
908	D7019	B7B	3310240000000	ESD Protection Diode MMBZ20VALT1G
909	D7020	B7B	3310240000000	ESD Protection Diode MMBZ20VALT1G
910	D7103	B6H	3310240200000	ESD Protection Diode MMBZ5V6ALT1G
911	D7104	B6F	3302100000010	Zener diode MMSZ5226B
912	D7105	B6F	3302100000010	Zener diode MMSZ5226B
913	D8001	B7F	3310240000000	ESD Protection Diode MMBZ20VALT1G
914	D8003	B7G	3310240000000	ESD Protection Diode MMBZ20VALT1G
915	D8004	B7G	3302031100010	Zener diode EDZTE613.6B
916	D8006	B5D	3307110100080	【MSD3】LED KPT-1608SGC
917	D8007	B5D	3307110100080	【MSD3】LED KPT-1608SGC
918	D8008	B5D	3307110100080	【MSD3】LED KPT-1608SGC
919	D8009	B5D	3307110100080	【MSD3】LED KPT-1608SGC
920	D8010	B5E	3307110100080	【MSD3】LED KPT-1608SGC
921	D8011	B5E	3307110100080	【MSD3】LED KPT-1608SGC
922	D8012	B5D	3307110100080	【MSD3】LED KPT-1608SGC

No.	Ref No.	Print No.	Part No.	Description
923	D8013	B5E	3307110100080	【MSD3】LED KPT-1608SGC
924	D8014	T3H	3303030800020	Switching Diode 1SS390
925	F6001	T7A	4002000000340	Recoverable fuse 1812L150/24
926	L1000	T4H	3221506601000	Ferrite bead BLM18AG601SN1D
927	L1001	T4I	3221506601000	Ferrite bead BLM18AG601SN1D
928	L1002	T4I	3221506601000	Ferrite bead BLM18AG601SN1D
929	L1003	B5H	3212106560000	56nH
930	L1004	B5H	3210306101000	100nH
931	L1005	B5H	3212106560000	56nH
932	L1006	B5H	3212106100000	10nH
933	L1007	B5H	3212106100000	10nH
934	L1008	B5H	3212106100000	10nH
935	L1011	T5G	3221506601000	Ferrite bead BLM18AG601SN1D
936	L1012	T5H	3213306561000	0.56uH
937	L1015	T9B	3221506601000	Ferrite bead BLM18AG601SN1D
938	L1016	T9B	3221506601000	Ferrite bead BLM18AG601SN1D
939	L1017	T9B	3221506601000	Ferrite bead BLM18AG601SN1D
940	L1018	B8C	3210306470000	47nH
941	L1019	B8C	3210306820000	82nH
942	L1020	B8B	3210306470000	47nH
943	L1022	B8C	3212106829000	8.2nH
944	L1023	B8B	3212106829000	8.2nH
945	L1025	T9C	3221506601000	Ferrite bead BLM18AG601SN1D
946	L1027	T8B	3213306561000	0.56uH
947	L2000	B5G	3221506601000	Ferrite bead BLM18AG601SN1D
948	L2001	B4H	3217607681000	680nH
949	L2002	B5G	3221506601000	Ferrite bead BLM18AG601SN1D
950	L2003	B4H	3217607681000	680nH
951	L2004	B4G	3221506601000	Ferrite bead BLM18AG601SN1D
952	L2005	B4H	3217607681000	680nH
953	L2007	B4H	3217107121000	120nH
954	L2008	B4H	3211256000000	56nH
955	L2009	B4H	3217607681000	680nH
956	L2010	T4G	3221506601000	Ferrite bead BLM18AG601SN1D
957	L2012	T4G	3212106221000	220nH
958	L2013	B4H	3221506601000	Ferrite bead BLM18AG601SN1D
959	L2014	T4G	3210306470000	47nH
960	L2015	T4G	3212106221000	220nH
961	L2016	T4G	3210306470000	47nH
962	L2017	T5G	3221506601000	Ferrite bead BLM18AG601SN1D
963	L2018	T5G	3212106221000	220nH
964	L2022	T5G	3001050000000	0Ω

No.	Ref No.	Print No.	Part No.	Description
965	L2023	B4G	3217607681000	680nH
966	L2024	B4G	3217607681000	680nH
967	L2025	B4G	3217607681000	680nH
968	L2026	B4G	3217107121000	120nH
969	L2027	B4G	3211256000000	56nH
970	L2028	B4H	3217607681000	680nH
971	L2029	B9B	3221506601000	Ferrite bead BLM18AG601SN1D
972	L2030	B9B	3217607681000	680nH
973	L2031	B8C	3221506601000	Ferrite bead BLM18AG601SN1D
974	L2032	B9B	3217607681000	680nH
975	L2033	B9C	3217607681000	680nH
976	L2034	B9B	3217112220010	22nH
977	L2035	B9B	3214307390000	39nH
978	L2036	T9C	3221506601000	Ferrite bead BLM18AG601SN1D
979	L2037	B9C	3217607681000	680nH
980	L2038	T9C	3210306101000	100nH
981	L2039	T9C	3210306101000	100nH
982	L2040	B9C	3217607681000	680nH
983	L2041	T8C	3210306470000	47nH
984	L2042	T8C	3210306470000	47nH
985	L2043	B9B	3217607681000	680nH
986	L2044	T9C	3221506601000	Ferrite bead BLM18AG601SN1D
987	L2045	B9B	3217607681000	680nH
988	L2046	B9C	3217607681000	680nH
989	L2047	T9C	3001050000000	0Ω
990	L2048	B9C	3217607681000	680nH
991	L2049	B9C	3217112220010	22nH
992	L2050	B9C	3214307390000	39nH
993	L2051	B9C	3217607681000	680nH
994	L2052	B8B	3221506601000	Ferrite bead BLM18AG601SN1D
995	L2053	B9B	3221506601000	Ferrite bead BLM18AG601SN1D
996	L2055	B9B	3221506601000	Ferrite bead BLM18AG601SN1D
997	L2056	B9B	3221506601000	Ferrite bead BLM18AG601SN1D
998	L2059	T9C	3001050000000	0Ω
999	L2060	T9C	3210306101000	100nH
1000	L2061	T4G	3001050000000	0Ω
1001	L3001	T2B	3221513600000	Ferrite bead BLM41PG600SN1
1002	L3002	T2C	3221513600000	Ferrite bead BLM41PG600SN1
1003	L3003	T2C	3221513600000	Ferrite bead BLM41PG600SN1
1004	L3004	T2B	3221513600000	Ferrite bead BLM41PG600SN1
1005	L3005	T2C	3233099400010	Air-core coil SJ0.80-5TR40NK
1006	L3007	T2E	3233099400010	Air-core coil SJ0.80-5TR40NK

No.	Ref No.	Print No.	Part No.	Description
1007	L3008	T2F	3233099400010	Air-core coil SJ0.80-5TR40NK
1008	L3009	T1F	3233099400010	Air-core coil SJ0.80-5TR40NK
1009	L3010	T2H	3210306330000	33nH
1010	L3011	T2H	3217112102020	1uH
1011	L3012	T1G	3210306180000	18nH
1012	L3013	T3D	3210306150000	15nH
1013	L3014	T4E	3221513600000	Ferrite bead BLM41PG600SN1
1014	L3015	T3G	3221506601000	Ferrite bead BLM18AG601SN1D
1015	L3016	T4F	3221506601000	Ferrite bead BLM18AG601SN1D
1016	L3017	T4D	3233099470000	Air-core coil 0.35-8TR47NK
1017	L3018	T4F	3212106221000	220nH
1018	L3019	T4E	3212106120000	12nH
1019	L3022	T3E	3221506601000	Ferrite bead BLM18AG601SN1D
1020	L3023	T4E	3210306150000	15nH
1021	L3024	T2H	3213306102000	1uH
1022	L3025	T3D	3212106120000	12nH
1023	L3027	T2D	3237199050010	Air-core coil A02TGLC
1024	L3030	T1D	3237199190000	Air-core coil AO5T_LC
1025	L3031	T2D	3237199080000	Air-core coil AO3TGLC
1026	L4001	T9F	3211506101000	Ferrite bead BLM18PG600SN1D
1027	L4002	T9G	3211506101000	Ferrite bead BLM18PG600SN1D
1028	L4003	T9G	3210306561010	560nH
1029	L4004	T9G	3210306560000	56nH
1030	L4007	T9I	3217107470010	47nH
1031	L4008	T9I	3217107470010	47nH
1032	L4009	T8I	3217107470010	47nH
1033	L4012	T8H	3217107180010	18nH
1034	L4013	T8G	3210306330000	33nH
1035	L4014	T8H	3217107180010	18nH
1036	L4015	T8H	3101064700000	47PF
1037	L4016	T8G	3001060000000	0Ω
1038	L4017	T9F	3210306470000	47nH
1039	L4018	T9F	3210306470000	47nH
1040	L4019	B9D	3211506101000	Ferrite bead BLM18PG600SN1D
1041	L4020	T9F	3217107180010	18nH
1042	L4021	B9E	3210306680000	68nH
1043	L4022	B9E	3217106390010	39nH
1044	L4023	B9E	3217106330000	33nH
1045	L4024	B9E	3217106330000	33nH
1046	L4026	B9F	3210306470000	47nH
1047	L4027	T9E	3211506101000	Ferrite bead BLM18PG600SN1D
1048	L4028	T9D	3101061040020	0.1UF

No.	Ref No.	Print No.	Part No.	Description
1049	L4029	B9F	3210406471000	470nH
1050	L4030	T9D	3213306821000	0.82uH
1051	L4031	T9E	3001060000000	0Ω
1052	L4032	T9E	3001060000000	0Ω
1053	L4033	T8F	3217107180010	18nH
1054	L5001	T8E	3001060000000	0Ω
1055	L5002	T8D	3221506601000	Ferrite bead BLM18AG601SN1D
1056	L5003	T8D	3221506601000	Ferrite bead BLM18AG601SN1D
1057	L5004	T8E	3221506601000	Ferrite bead BLM18AG601SN1D
1058	L5005	B8D	3213306682000	6.8uH
1059	L5006	T8E	3213212103000	10uH
1060	L5007	T8E	3213212103000	10uH
1061	L5008	T8E	3221506601000	Ferrite bead BLM18AG601SN1D
1062	L5009	B8D	3297107391000	390nH
1063	L5010	T8D	3221506601000	Ferrite bead BLM18AG601SN1D
1064	L5011	T8E	3221506601000	Ferrite bead BLM18AG601SN1D
1065	L5012	T8D	3221506601000	Ferrite bead BLM18AG601SN1D
1066	L5013	B8E	3210406471000	470nH
1067	L5014	T8E	3221506601000	Ferrite bead BLM18AG601SN1D
1068	L5015	T8D	3213306561000	0.56uH
1069	L5016	B8E	3213212332000	3.3uH
1070	L6001	T6C	3217699153000	15UH
1071	L6002	T6B	3241799103000	Power inductor CDRH6D28NP-100NC-HYT
1072	L6003	T6B	3221513600000	Ferrite bead BLM41PG600SN1
1073	L6004	T5B	3221513600000	Ferrite bead BLM41PG600SN1
1074	L6005	B7B	3221506181000	180Ω
1075	L6006	B7B	3241799103000	Power inductor CDRH6D28NP-100NC-HYT
1076	L6007	B6C	3241799103000	Power inductor CDRH6D28NP-100NC-HYT
1077	L6008	B6C	3221506181000	180Ω
1078	L6009	B7C	3211799622010	6.2uH
1079	L6010	T7A	3221513600000	Ferrite bead BLM41PG600SN1
1080	L6011	B7C	3221506181000	180Ω
1081	L6013	T4B	3241799103000	Power inductor CDRH6D28NP-100NC-HYT
1082	L6014	T5C	3217699153000	15UH
1083	L6015	B6B	3221513600000	Ferrite bead BLM41PG600SN1
1084	L6016	T8C	3221506181000	180Ω
1085	L6017	B5A	3221513600000	Ferrite bead BLM41PG600SN1
1086	L6028	T8H	3221506181000	180Ω
1087	L6030	B6B	3221506181000	180Ω
1088	L6031	T5I	3221506181000	180Ω
1089	L6033	T8C	3221506181000	180Ω
1090	L6034	T5F	3221506181000	180Ω

No.	Ref No.	Print No.	Part No.	Description
1091	L7002	T7E	3210406471000	470nH
1092	L7003	T7E	3210406471000	470nH
1093	L8005	B8G	3221506181000	180Ω
1094	L8007	B7H	3221506300000	30Ω
1095	L8009	B8G	3221506601070	Ferrite bead BLM18BD601SN1D
1096	L8013	T6E	3221513600000	Ferrite bead BLM41PG600SN1
1097	Q2001	B5G	3499000000150	Compound Transistor UMC4(NTR)PNP+NPN
1098	Q2002	B4G	3403003000060	NPN Transistor 2SC4617TLS
1099	Q2003	B4H	3408002000080	NPN Transistor 2SC5010
1100	Q2004	B4G	3499000000150	Compound Transistor UMC4(NTR)PNP+NPN
1101	Q2005	T4G	3404006000000	NPN Transistor PBR941
1102	Q2006	T5G	3609003999000	MMIC Amplifier UPC8179TK
1103	Q2007	B4G	3408002000080	NPN Transistor 2SC5010
1104	Q2009	B8B	3403003000060	NPN Transistor 2SC4617TLS
1105	Q2010	B9B	3499000000150	Compound Transistor UMC4(NTR)PNP+NPN
1106	Q2011	B9B	3408002000080	NPN Transistor 2SC5010
1107	Q2012	T9C	3404006000000	NPN Transistor PBR941
1108	Q2013	T9C	3609003999000	MMIC Amplifier UPC8179TK
1109	Q2014	B9C	3408002000080	NPN Transistor 2SC5010
1110	Q2015	B9B	3499000000150	Compound Transistor UMC4(NTR)PNP+NPN
1111	Q2017	B9B	3403003000060	NPN Transistor 2SC4617TLS
1112	Q3001	T3D	3601017000000	【Anti-moisture】RF PA module PD85035STR1-E
1113	Q3002	T3D	3504990000050	PA MOSFETRD02MUS1B-T112
1114	Q3003	T4F	3404999000000	NPN Transistor BFG540W
1115	Q4001	T9G	3403014000020	Compound Transistor UMT1NTRPNP*2
1116	Q4002	T8G	3404999000000	NPN Transistor BFG540W
1117	Q4003	B9E	3404999000000	NPN Transistor BFG540W
1118	Q4004	T9D	3404006000000	NPN Transistor PBR941
1119	Q4005	T9D	3404006000000	NPN Transistor PBR941
1120	Q5001	B8E	3403003000060	NPN Transistor 2SC4617TLS
1121	Q5002	B8E	3408002000000	NPN Transistor 2SC3356-T1B-A-R24
1122	Q6000	B5C	3413999000000	NPN Transistor FZT651
1123	Q6001	T5E	3599990000710	P-MOSFETIRLML9303TRPbF
1124	Q6002	T7B	3403002000010	PNP Transistor 2SB1184
1125	Q6003	T7B	3403008000010	Biasing Resistor Transistor DTC114EE(TL)
1126	Q6004	T4F	3403008000010	Biasing Resistor Transistor DTC114EE(TL)
1127	Q6005	B4C	3403008000010	Biasing Resistor Transistor DTC114EE(TL)
1128	Q6007	T7B	3403002000000	PNP Transistor 2SB1132FD5T100R
1129	Q6009	T7B	3403008000010	Biasing Resistor Transistor DTC114EE(TL)
1130	Q6016	T7C	3403002000000	PNP Transistor 2SB1132FD5T100R
1131	Q6017	T7C	3403008000010	Biasing Resistor Transistor DTC114EE(TL)
1132	Q6021	T5I	3403008000010	Biasing Resistor Transistor DTC114EE(TL)

No.	Ref No.	Print No.	Part No.	Description
1133	Q7001	B8B	3414999000000	Biasing Resistor Transistor MUN5214DW1T1G
1134	Q7002	B7C	3414999000000	Biasing Resistor Transistor MUN5214DW1T1G
1135	Q7003	B8B	3414999000000	Biasing Resistor Transistor MUN5214DW1T1G
1136	Q7004	B8C	3414999000000	Biasing Resistor Transistor MUN5214DW1T1G
1137	Q7005	B8B	3414999000000	Biasing Resistor Transistor MUN5214DW1T1G
1138	Q7006	B7B	3414999000000	Biasing Resistor Transistor MUN5214DW1T1G
1139	Q7007	B7C	3414999000000	Biasing Resistor Transistor MUN5214DW1T1G
1140	Q7008	B8C	3414999000000	Biasing Resistor Transistor MUN5214DW1T1G
1141	Q7009	B8B	3414999000000	Biasing Resistor Transistor MUN5214DW1T1G
1142	Q7101	B7I	3403008000010	Biasing Resistor Transistor DTC114EE(TL)
1143	Q7102	B7I	3403008000010	Biasing Resistor Transistor DTC114EE(TL)
1144	Q7103	B7I	3403008000010	Biasing Resistor Transistor DTC114EE(TL)
1145	Q7104	B8I	3403008000010	Biasing Resistor Transistor DTC114EE(TL)
1146	Q7105	B7I	3403008000010	Biasing Resistor Transistor DTC114EE(TL)
1147	Q7106	B8I	3403008000010	Biasing Resistor Transistor DTC114EE(TL)
1148	Q7108	B8I	3403008000010	Biasing Resistor Transistor DTC114EE(TL)
1149	Q8004	B7G	3499000000150	Compound Transistor UMC4(NTR)PNP+NPN
1150	Q8006	B7G	3499000000150	Compound Transistor UMC4(NTR)PNP+NPN
1151	Q8007	B8H	3499000000150	Compound Transistor UMC4(NTR)PNP+NPN
1152	Q8008	B7G	3499000000150	Compound Transistor UMC4(NTR)PNP+NPN
1153	Q8009	B7G	3499000000150	Compound Transistor UMC4(NTR)PNP+NPN
1154	Q8010	B7G	3403008000010	Biasing Resistor Transistor DTC114EE(TL)
1155	R1000	T4H	3001051000000	10Ω
1156	R1001	B5H	3001054720000	4.7KΩ
1157	R1002	T4I	3001051020010	1KΩ
1158	R1003	T5H	3001051010000	100Ω
1159	R1004	T4H	3001051010000	100Ω
1160	R1005	T5H	3001051000000	10Ω
1161	R1006	T4I	3001051030000	10KΩ
1162	R1007	T4I	3001051020010	1KΩ
1163	R1008	T4H	3001051020010	1KΩ
1164	R1009	T4H	3001055100010	51Ω
1165	R1010	T5H	3001055100010	51Ω
1166	R1011	T5H	3001055100010	51Ω
1167	R1013	T4H	3001061010000	100Ω
1168	R1014	T4H	3001062200000	22Ω
1169	R1016	T4H	3001061510000	150Ω
1170	R1017	T4I	3001051210000	120Ω
1171	R1020	T4I	3001051020010	1KΩ
1172	R1022	T4H	3001063300000	33Ω
1173	R1025	T4H	3001051000000	10Ω
1174	R1027	T4H	3001050000000	0Ω

No.	Ref No.	Print No.	Part No.	Description
1175	R1028	T5F	3001051020010	1KΩ
1176	R1029	T5F	3001051030000	10KΩ
1177	R1030	T5F	3001051040010	100KΩ
1178	R1031	T5G	3001051030000	10KΩ
1179	R1036	T5G	3001051020010	1KΩ
1180	R1038	T4H	3001050000000	0Ω
1181	R1039	T9B	3001050000000	0Ω
1182	R1040	T4H	3001051020010	1KΩ
1183	R1043	T4H	3001051520000	1.5KΩ
1184	R1046	T4I	3001051020010	1KΩ
1185	R1047	T9B	3001051000000	10Ω
1186	R1048	B8B	3001054720000	4.7KΩ
1187	R1049	T9A	3001051020010	1KΩ
1188	R1050	T8B	3001051010000	100Ω
1189	R1051	T9B	3001051010000	100Ω
1190	R1052	T9A	3001051030000	10KΩ
1191	R1053	T8B	3001051000000	10Ω
1192	R1054	T9A	3001051020010	1KΩ
1193	R1055	T9B	3001051020010	1KΩ
1194	R1056	T8B	3001055100010	51Ω
1195	R1057	T8B	3001055100010	51Ω
1196	R1058	T8B	3001055100010	51Ω
1197	R1059	T9B	3001061510000	150Ω
1198	R1060	T9B	3001060000000	0Ω
1199	R1061	T9B	3001061210000	120Ω
1200	R1062	T9B	3001051210000	120Ω
1201	R1064	T9B	3001050000000	0Ω
1202	R1066	T9B	3001062200000	22Ω
1203	R1068	T9B	3001051020010	1KΩ
1204	R1069	T9B	3001051000000	10Ω
1205	R1072	B4H	3001051030000	10KΩ
1206	R1074	T9B	3001051020010	1KΩ
1207	R1076	T9B	3001051520000	1.5KΩ
1208	R1077	T9B	3001054710000	470Ω
1209	R1080	T9C	3001051020010	1KΩ
1210	R1081	B9C	3001051030000	10KΩ
1211	R2000	B4H	3001063320000	3.3KΩ
1212	R2001	B4I	3001068220000	8.2KΩ
1213	R2002	B5H	3001051010000	100Ω
1214	R2003	B4G	3001054720000	4.7KΩ
1215	R2005	B5G	3001051040010	100KΩ
1216	R2006	B5G	3001051020010	1KΩ

No.	Ref No.	Print No.	Part No.	Description
1217	R2007	B4G	3001051040010	100KΩ
1218	R2008	T4G	3001061510000	150Ω
1219	R2009	T5G	3001061000000	10Ω
1220	R2010	B4H	3210306220000	22nH
1221	R2011	B4G	3001051020010	1KΩ
1222	R2012	B4H	3001061510000	150Ω
1223	R2013	T4G	3001053320000	3.3KΩ
1224	R2015	B4H	3001055630000	56KΩ
1225	R2016	B4H	3001051040010	100KΩ
1226	R2017	T4G	3001050000000	0Ω
1227	R2018	T4G	3001051530000	15KΩ
1228	R2020	T4G	3001050000000	0Ω
1229	R2021	B4H	3001053930000	39KΩ
1230	R2022	T8C	3001050000000	0Ω
1231	R2023	B5G	3001051020010	1KΩ
1232	R2025	T4G	3001050000000	0Ω
1233	R2026	B4G	3001051020010	1KΩ
1234	R2028	T5G	3001051000000	10Ω
1235	R2031	B4H	3001051030000	10KΩ
1236	R2032	B4H	3001051530000	15KΩ
1237	R2033	B5G	3001063320000	3.3KΩ
1238	R2034	T4G	3001058220000	8.2KΩ
1239	R2037	T4G	3001053900010	39Ω
1240	R2038	T5G	3001054710000	470Ω
1241	R2039	T5G	3001054710000	470Ω
1242	R2041	B4H	3210306220000	22nH
1243	R2042	B5G	3001068220000	8.2KΩ
1244	R2044	B5G	3001051010000	100Ω
1245	R2045	B4H	3001061210000	120Ω
1246	R2046	B9B	3001063320000	3.3KΩ
1247	R2047	B8B	3001054720000	4.7KΩ
1248	R2048	B9B	3001068220000	8.2KΩ
1249	R2049	B9B	3001051010000	100Ω
1250	R2050	B9B	3001051040010	100KΩ
1251	R2051	B8C	3001051040010	100KΩ
1252	R2052	B8B	3001051020010	1KΩ
1253	R2053	T9C	3001062210000	220Ω
1254	R2055	B9C	3001061510000	150Ω
1255	R2056	T9C	3001053320000	3.3KΩ
1256	R2057	T9C	3001061000000	10Ω
1257	R2058	T9C	3001051530000	15KΩ
1258	R2059	B8C	3001063320000	3.3KΩ

No.	Ref No.	Print No.	Part No.	Description
1259	R2060	T9C	3001050000000	0Ω
1260	R2061	T9C	3001050000000	0Ω
1261	R2062	B8C	3001051010000	100Ω
1262	R2063	B9C	3001068220000	8.2KΩ
1263	R2065	T9C	3001051000000	10Ω
1264	R2067	T9D	3001052200000	22Ω
1265	R2068	T9C	3001054710000	470Ω
1266	R2069	T9C	3001054710000	470Ω
1267	R2071	T9C	3001058220000	8.2KΩ
1268	R2072	B9C	3001068200000	82Ω
1269	R2073	B9A	3001051020010	1KΩ
1270	R2076	B8B	3001051020010	1KΩ
1271	R2078	B9B	3001051020010	1KΩ
1272	R2082	B9B	3001054720000	4.7KΩ
1273	R2086	B9B	3001050000000	0Ω
1274	R3001	T2C	3001081000000	10Ω
1275	R3002	T2H	3001082730000	27KΩ
1276	R3003	T3C	3001084790000	4.7Ω
1277	R3004	T2H	3001065100000	51Ω
1278	R3005	T3C	3001084790000	4.7Ω
1279	R3007	T3D	3001084790000	4.7Ω
1280	R3008	T2H	3001071510010	150Ω
1281	R3009	T3D	3001084790000	4.7Ω
1282	R3010	T2H	3001061210000	120Ω
1283	R3011	T1G	3001071510010	150Ω
1284	R3012	T1G	3001071510010	150Ω
1285	R3013	T3C	3001081010000	100Ω
1286	R3014	T3C	3001062220000	2.2KΩ
1287	R3015	T1H	3001061010000	100Ω
1288	R3016	T1H	3001064710000	470Ω
1289	R3017	T1H	3001064710000	470Ω
1290	R3018	T3C	3001068220030	8.2KΩ
1291	R3019	T2G	3210306101000	100nH
1292	R3020	T2G	3101061500010	15PF
1293	R3021	T3G	3001054730000	47KΩ
1294	R3022	T2G	3101061500010	15PF
1295	R3023	T3G	3101051020010	1000PF
1296	R3029	T3G	3001053320000	3.3KΩ
1297	R3030	T3G	3001051030000	10KΩ
1298	R3031	T3G	3001050000000	0Ω
1299	R3032	T2G	3001052730000	27KΩ
1300	R3033	T2G	3001052220010	2.2KΩ

No.	Ref No.	Print No.	Part No.	Description
1301	R3034	T2G	3001055610000	560Ω
1302	R3035	T3G	3001053320000	3.3KΩ
1303	R3036	T3G	3001051230000	12KΩ
1304	R3037	T3G	3001053040040	300KΩ
1305	R3039	T3G	3001050000000	0Ω
1306	R3040	T4F	3001071010000	100Ω
1307	R3041	T1G	3001050000000	0Ω
1308	R3042	T3G	3001051520010	1.5KΩ
1309	R3043	T2G	3001051540000	150KΩ
1310	R3044	T2G	3001050000000	0Ω
1311	R3045	T4F	3001063320000	3.3KΩ
1312	R3046	T1G	3001058230000	82KΩ
1313	R3047	T2G	3001051020010	1KΩ
1314	R3049	T2G	3001051030000	10KΩ
1315	R3050	T2G	3001053930000	39KΩ
1316	R3051	T3E	3001064790000	4.7Ω
1317	R3052	T4E	3001060000000	0Ω
1318	R3054	T3E	3001064790000	4.7Ω
1319	R3055	T2G	3001056830000	68KΩ
1320	R3056	T4F	3001050000000	0Ω
1321	R3057	T4F	3001056800010	68Ω
1322	R3058	T2H	3001051020010	1KΩ
1323	R3059	T3D	3001071010000	100Ω
1324	R3060	T3H	3001050000000	0Ω
1325	R3062	T4F	3001051010000	100Ω
1326	R3063	T2H	3001053330010	33KΩ
1327	R3065	T4F	3001051010000	100Ω
1328	R3067	T3E	3001062220000	2.2KΩ
1329	R3068	T3E	3001061230000	12KΩ
1330	R3069	T4F	3001061800000	18Ω
1331	R3071	T3H	3001051520010	1.5KΩ
1332	R3072	T3H	3001053320000	3.3KΩ
1333	R3073	T4F	3001064720000	4.7KΩ
1334	R3074	T2G	3001054740010	470KΩ
1335	R3076	T2H	3001051340000	130KΩ
1336	R3077	T2H	3001051040000	100KΩ
1337	R3079	T3G	3001054740010	470KΩ
1338	R3080	T2G	3001051040000	100KΩ
1339	R3081	T3G	3001054740010	470KΩ
1340	R3082	T3G	3001054740010	470KΩ
1341	R3083	T3G	3001055630000	56KΩ
1342	R3084	T3H	3001054740010	470KΩ

No.	Ref No.	Print No.	Part No.	Description
1343	R3085	T3H	3001051530000	15KΩ
1344	R3090	T4F	3001061530010	15KΩ
1345	R4001	T9G	3001060000000	0Ω
1346	R4002	T9G	3001056810000	680Ω
1347	R4003	T9G	3001051040010	100KΩ
1348	R4004	T9G	3001071000000	10Ω
1349	R4005	T9G	3001051040010	100KΩ
1350	R4007	T9G	3001051030000	10KΩ
1351	R4008	T9F	3001051040010	100KΩ
1352	R4009	T9H	3001051040010	100KΩ
1353	R4010	T9H	3001051040010	100KΩ
1354	R4011	T9G	3001052730000	27KΩ
1355	R4012	T9G	3001051040010	100KΩ
1356	R4013	T9G	3001052720010	2.7KΩ
1357	R4014	T9G	3001055620000	5.6KΩ
1358	R4015	T8G	3001053310000	330Ω
1359	R4016	T8H	3001051040010	100KΩ
1360	R4017	T9H	3001051040010	100KΩ
1361	R4018	T9F	3001051040010	100KΩ
1362	R4019	T9G	3001051040010	100KΩ
1363	R4020	T8G	3001051220000	1.2KΩ
1364	R4022	B9E	3001071010000	100Ω
1365	R4023	B9E	3001071510010	150Ω
1366	R4024	B9D	3001053320000	3.3KΩ
1367	R4025	B9E	3001051220000	1.2KΩ
1368	R4026	B9F	3001055100010	51Ω
1369	R4027	B9D	3001056800010	68Ω
1370	R4028	B9D	3001051220000	1.2KΩ
1371	R4029	B9D	3001051010000	100Ω
1372	R4030	B9D	3001051010000	100Ω
1373	R4031	B9D	3001063310010	330Ω
1374	R4032	T9D	3001055120030	5.1K
1375	R4033	T9E	3001051220000	1.2KΩ
1376	R4034	T9D	3001055100010	51Ω
1377	R4035	T9D	3001053310000	330Ω
1378	R4036	T9E	3001054720000	4.7KΩ
1379	R4037	T9D	3001053030010	30KΩ
1380	R4038	T9E	3001052030000	20KΩ
1381	R4039	T9D	3001053030010	30KΩ
1382	R4040	T9E	3001055630000	56KΩ
1383	R4041	T9F	3001052720010	2.7KΩ
1384	R4042	B9E	3001050000000	0Ω

No.	Ref No.	Print No.	Part No.	Description
1385	R4043	B9F	3001050000000	0Ω
1386	R5001	T8E	3001060000000	0Ω
1387	R5002	T8E	3001055100010	51Ω
1388	R5003	T8D	3001051220000	1.2KΩ
1389	R5004	T8D	3001051820000	1.8KΩ
1390	R5005	B8D	3001061030010	10KΩ
1391	R5006	B8E	3001053310000	330Ω
1392	R5007	B8E	3001054720000	4.7KΩ
1393	R5008	T8D	3001051030000	10KΩ
1394	R5009	T8D	3001053300010	33Ω
1395	R5010	T8D	3001053300010	33Ω
1396	R5011	B8D	3001068220000	8.2KΩ
1397	R5012	T8D	3001053300010	33Ω
1398	R5013	B8E	3001053310000	330Ω
1399	R5014	T8E	3001051040010	100KΩ
1400	R5015	T8D	3001053300010	33Ω
1401	R5016	B8E	3001051820000	1.8KΩ
1402	R5017	T8D	3001053300010	33Ω
1403	R5018	T8E	3001053300010	33Ω
1404	R5019	T8D	3001053300010	33Ω
1405	R5020	B8E	3001055620000	5.6KΩ
1406	R5021	B8E	3001055110000	510Ω
1407	R5022	B8D	3001051220000	1.2KΩ
1408	R6001	T5E	3001054730000	47KΩ
1409	R6002	T6B	3001061030010	10KΩ
1410	R6003	T6B	3001051230000	12KΩ
1411	R6004	T6B	3001063320000	3.3KΩ
1412	R6005	T5B	3001069130000	91KΩ
1413	R6006	B7C	3001054730000	47KΩ
1414	R6007	B6B	3001054730000	47KΩ
1415	R6008	B7B	3001054730000	47KΩ
1416	R6009	T5B	3001068220030	8.2KΩ
1417	R6010	B7B	3001054730000	47KΩ
1418	R6011	B7B	3001054730000	47KΩ
1419	R6012	B7B	3001054730000	47KΩ
1420	R6013	T6B	3001051040010	100KΩ
1421	R6014	T5B	3001062230030	22KΩ
1422	R6015	T4B	3001061040010	100KΩ
1423	R6016	T5E	3001061530010	15KΩ
1424	R6017	T5E	3001062220000	2.2KΩ
1425	R6019	B6B	3001051030000	10KΩ
1426	R6020	T7B	3001054730000	47KΩ

No.	Ref No.	Print No.	Part No.	Description
1427	R6021	B6B	3001050000000	0Ω
1428	R6022	B7C	3001062040020	200KΩ
1429	R6023	T7B	3001071020000	1KΩ
1430	R6025	T7B	3001051020010	1KΩ
1431	R6026	T4F	3001061820000	1.8KΩ
1432	R6027	B7C	3001061240010	120KΩ
1433	R6028	T7B	3001051030000	10KΩ
1434	R6029	B6F	3001050000000	0Ω
1435	R6030	B6F	3001053300010	33Ω
1436	R6031	T5B	3001074720010	4.7KΩ
1437	R6032	B6F	3001051330000	13KΩ
1438	R6033	B6F	3001051330000	13KΩ
1439	R6034	B5F	3001054740010	470KΩ
1440	R6035	B5F	3001051230010	12KΩ
1441	R6036	B6F	3001051220000	1.2KΩ
1442	R6037	B5F	3001053320010	3.3KΩ
1443	R6038	B5F	3001051230010	12KΩ
1444	R6039	T8B	3001054730000	47KΩ
1445	R6040	B5A	3001070000000	0Ω
1446	R6041	B5F	3001052220010	2.2KΩ
1447	R6042	T7B	3001054730000	47KΩ
1448	R6043	B5C	3001061030010	10KΩ
1449	R6044	B6F	3001051330000	13KΩ
1450	R6045	T7B	3001054720000	4.7KΩ
1451	R6046	B4C	3001061030010	10KΩ
1452	R6047	B5C	3001053300010	33Ω
1453	R6048	T7C	3001054720000	4.7KΩ
1454	R6049	B6F	3001051330000	13KΩ
1455	R6050	B6F	3001054740010	470KΩ
1456	R6051	B6F	3001051220000	1.2KΩ
1457	R6052	B6F	3001059120000	9.1K
1458	R6053	B6F	3001059120000	9.1K
1459	R6054	T5B	3001061840000	180KΩ
1460	R6055	T5F	3001054730000	47KΩ
1461	R6057	T5B	3001067520030	7.5K
1462	R6063	T8H	3001054730000	47KΩ
1463	R6068	T8C	3001054730000	47KΩ
1464	R6070	B5C	3001054710010	470Ω
1465	R6072	B4C	3001061010000	100Ω
1466	R6073	B5C	3001061030010	10KΩ
1467	R6075	B6B	3001053300010	33Ω
1468	R6076	B6B	3001054720000	4.7KΩ

No.	Ref No.	Print No.	Part No.	Description
1469	R6077	B6B	3001054720000	4.7KΩ
1470	R6090	T8H	3001054730000	47KΩ
1471	R6106	B6B	3001053300010	33Ω
1472	R7004	T5G	3001051030000	10KΩ
1473	R7005	T5G	3001051030000	10KΩ
1474	R7006	T5G	3001051030000	10KΩ
1475	R7008	T5G	3001050000000	0Ω
1476	R7010	T6H	3001051030000	10KΩ
1477	R7011	T6H	3001051030000	10KΩ
1478	R7012	T6H	3001051030000	10KΩ
1479	R7013	T6H	3001051030000	10KΩ
1480	R7014	T6H	3001051030000	10KΩ
1481	R7015	T6H	3001051030000	10KΩ
1482	R7016	T6H	3001051030000	10KΩ
1483	R7017	T5G	3001051030000	10KΩ
1484	R7020	B6G	3001060000000	0Ω
1485	R7022	T6F	3001053300010	33Ω
1486	R7023	T6G	3001053300010	33Ω
1487	R7024	T6G	3001051030000	10KΩ
1488	R7027	T6F	3001053300010	33Ω
1489	R7029	T6F	3001053300010	33Ω
1490	R7030	T6G	3001053300010	33Ω
1491	R7031	T6H	3001053300010	33Ω
1492	R7034	T6G	3001053300010	33Ω
1493	R7036	T6G	3001053300010	33Ω
1494	R7037	T6H	3001053300010	33Ω
1495	R7038	T6F	3001053300010	33Ω
1496	R7039	T6F	3001053300010	33Ω
1497	R7066	B6G	3001051030000	10KΩ
1498	R7071	B6G	3001053300010	33Ω
1499	R7073	B6G	3001053300010	33Ω
1500	R7075	T6F	3001053300010	33Ω
1501	R7077	B6G	3001053300010	33Ω
1502	R7078	T4I	3001053300010	33Ω
1503	R7082	T6F	3001053300010	33Ω
1504	R7083	T6F	3001053300010	33Ω
1505	R7084	T6G	3001053300010	33Ω
1506	R7086	T6F	3001051520000	1.5KΩ
1507	R7092	T6F	3001051530000	15KΩ
1508	R7093	T6F	3001051530000	15KΩ
1509	R7094	T7E	3001050000000	0Ω
1510	R7095	B7E	3001051000000	10Ω

No.	Ref No.	Print No.	Part No.	Description
1511	R7096	T6G	3001051020010	1KΩ
1512	R7097	T6G	3001051030000	10KΩ
1513	R7098	T6G	3001051020010	1KΩ
1514	R7099	T6G	3001051030000	10KΩ
1515	R7100	T6G	3001051030000	10KΩ
1516	R7101	T6F	3001053300010	33Ω
1517	R7102	T6G	3001051020010	1KΩ
1518	R7104	B6G	3001051030000	10KΩ
1519	R7105	B6G	3001051000000	10Ω
1520	R7106	T6F	3001051000000	10Ω
1521	R7107	T6F	3001053300010	33Ω
1522	R7108	B6G	3001051030000	10KΩ
1523	R7109	T6F	3001051030000	10KΩ
1524	R7111	T5I	3001053300010	33Ω
1525	R7112	T5I	3001053300010	33Ω
1526	R7113	T8G	3001053300010	33Ω
1527	R7114	B6G	3001060000000	0Ω
1528	R7115	T6F	3001051030000	10KΩ
1529	R7116	T5I	3001053300010	33Ω
1530	R7117	T6I	3001053300010	33Ω
1531	R7118	T6I	3001053300010	33Ω
1532	R7119	T6I	3001053300010	33Ω
1533	R7120	T6I	3001053300010	33Ω
1534	R7121	T8F	3001053300010	33Ω
1535	R7122	T6I	3001053300010	33Ω
1536	R7123	T7G	3001051030000	10KΩ
1537	R7124	T6F	3001054720000	4.7KΩ
1538	R7125	T6F	3001054720000	4.7KΩ
1539	R7127	T6F	3001051030000	10KΩ
1540	R7129	B6D	3001051030000	10KΩ
1541	R7130	T6E	3001051030000	10KΩ
1542	R7131	T6E	3001051030000	10KΩ
1543	R7133	T5E	3001050000000	0Ω
1544	R7135	T6E	3001051030000	10KΩ
1545	R7136	T7E	3001051030000	10KΩ
1546	R7137	T6E	3001051030000	10KΩ
1547	R7138	T6E	3001051030000	10KΩ
1548	R7139	T7E	3001051030000	10KΩ
1549	R7140	T6E	3001051030000	10KΩ
1550	R7141	T6E	3001051030000	10KΩ
1551	R7142	T6E	3001051030000	10KΩ
1552	R7145	T5D	3001060000000	0Ω

No.	Ref No.	Print No.	Part No.	Description
1553	R7146	T6D	3001053300010	33Ω
1554	R7147	T7D	3001053300010	33Ω
1555	R7148	T6D	3001053300010	33Ω
1556	R7149	T6D	3001053300010	33Ω
1557	R7150	T7D	3001053300010	33Ω
1558	R7151	T6D	3001053300010	33Ω
1559	R7152	T6D	3001053300010	33Ω
1560	R7156	B6D	3001053300010	33Ω
1561	R7157	T6D	3001053300010	33Ω
1562	R7158	T6D	3001053300010	33Ω
1563	R7159	T6D	3001053300010	33Ω
1564	R7161	T8G	3001053300010	33Ω
1565	R7162	T8G	3001053300010	33Ω
1566	R7163	T6D	3001052220010	2.2KΩ
1567	R7164	T8F	3001053300010	33Ω
1568	R7165	T7E	3001052220010	2.2KΩ
1569	R7166	T8F	3001053300010	33Ω
1570	R7168	T7D	3001053300010	33Ω
1571	R7169	T7D	3001053300010	33Ω
1572	R7170	T7E	3001053300010	33Ω
1573	R7171	B6D	3001051030000	10KΩ
1574	R7172	T7E	3001053300010	33Ω
1575	R7173	T6D	3001053300010	33Ω
1576	R7174	T6D	3001053300010	33Ω
1577	R7175	T6D	3001053300010	33Ω
1578	R7176	T6D	3001051520000	1.5KΩ
1579	R7177	T6D	3001050000000	0Ω
1580	R7178	T8F	3001053300010	33Ω
1581	R7179	T7D	3001051020010	1KΩ
1582	R7180	T7E	3001051030000	10KΩ
1583	R7181	T7D	3001051020010	1KΩ
1584	R7182	T7D	3001051030000	10KΩ
1585	R7183	T7D	3001051030000	10KΩ
1586	R7184	T7D	3001053300010	33Ω
1587	R7185	T7D	3001051020010	1KΩ
1588	R7187	B6D	3001051030000	10KΩ
1589	R7188	T6E	3001051000000	10Ω
1590	R7189	T7D	3001051000000	10Ω
1591	R7190	T6D	3001051030000	10KΩ
1592	R7192	T8F	3001053300010	33Ω
1593	R7193	B6D	3001060000000	0Ω
1594	R7194	T7F	3001054720000	4.7KΩ

No.	Ref No.	Print No.	Part No.	Description
1595	R7195	T7F	3001054720000	4.7KΩ
1596	R7196	T6D	3001053300010	33Ω
1597	R7197	T6D	3001053300010	33Ω
1598	R7198	T6D	3001051030000	10KΩ
1599	R7200	T7D	3001053300010	33Ω
1600	R7224	B8C	3001051030000	10KΩ
1601	R7225	B8C	3001051030000	10KΩ
1602	R7226	B8C	3001051030000	10KΩ
1603	R7227	B8C	3001051030000	10KΩ
1604	R7228	B7C	3001051030000	10KΩ
1605	R7229	B7B	3001051030000	10KΩ
1606	R7230	B8C	3001051030000	10KΩ
1607	R7231	B8B	3001051030000	10KΩ
1608	R7232	B8B	3001051030000	10KΩ
1609	R7233	B8C	3001051030000	10KΩ
1610	R7235	B8C	3001051030000	10KΩ
1611	R7236	B8C	3001051030000	10KΩ
1612	R7237	B8C	3001054720000	4.7KΩ
1613	R7238	B8C	3001054720000	4.7KΩ
1614	R7239	B8B	3001054720000	4.7KΩ
1615	R7240	B8B	3001054720000	4.7KΩ
1616	R7241	B7C	3001051030000	10KΩ
1617	R7242	B7C	3001054720000	4.7KΩ
1618	R7243	B8B	3001054720000	4.7KΩ
1619	R7244	B7C	3001051030000	10KΩ
1620	R7245	B7B	3001054720000	4.7KΩ
1621	R7246	B8C	3001051030000	10KΩ
1622	R7247	B8B	3001054720000	4.7KΩ
1623	R7248	B8C	3001051030000	10KΩ
1624	R7249	B8B	3001054720000	4.7KΩ
1625	R7252	B8C	3001053330010	33KΩ
1626	R7253	B8C	3001053330010	33KΩ
1627	R7254	B8C	3001061010000	100Ω
1628	R7255	B8B	3001053330010	33KΩ
1629	R7256	B8B	3001061010000	100Ω
1630	R7257	B8B	3001053330010	33KΩ
1631	R7258	B8B	3001061010000	100Ω
1632	R7259	B7B	3001053330010	33KΩ
1633	R7260	B7B	3001061010000	100Ω
1634	R7261	B7C	3001053330010	33KΩ
1635	R7262	B8C	3001053330010	33KΩ
1636	R7263	B8B	3001053330010	33KΩ

No.	Ref No.	Print No.	Part No.	Description
1637	R7264	B8B	3001051020010	1KΩ
1638	R7265	B8B	3001053330010	33KΩ
1639	R7267	B8B	3001050000000	0Ω
1640	R7276	B8B	3001050000000	0Ω
1641	R7282	B8B	3001053300010	33Ω
1642	R7283	B8B	3001051030000	10KΩ
1643	R7288	B7B	3001053300010	33Ω
1644	R7289	B8B	3001053300010	33Ω
1645	R7310	T7E	3001053300010	33Ω
1646	R7311	T7E	3001053300010	33Ω
1647	R7314	T7F	3001061010000	100Ω
1648	R7315	T7F	3001061010000	100Ω
1649	R7326	T5I	3001051030000	10KΩ
1650	R7401	B7H	3001061030010	10KΩ
1651	R7402	B7I	3001061810000	180Ω
1652	R7403	B7I	3001061810000	180Ω
1653	R7404	B7I	3001061810000	180Ω
1654	R7405	B8I	3001061810000	180Ω
1655	R7406	B7I	3001061810000	180Ω
1656	R7407	B8I	3001061810000	180Ω
1657	R7408	B7I	3001062220000	2.2KΩ
1658	R7409	B8I	3001061810000	180Ω
1659	R7410	T6G	3001051030000	10KΩ
1660	R8002	T5F	3001051010000	100Ω
1661	R8003	T5F	3001051010000	100Ω
1662	R8004	T5F	3001051000000	10Ω
1663	R8005	T5F	3001050000000	0Ω
1664	R8006	T5F	3001051020010	1KΩ
1665	R8008	T6F	3001061000000	10Ω
1666	R8009	T5F	3001051040010	100KΩ
1667	R8010	T5F	3001051040010	100KΩ
1668	R8012	T5F	3001056830000	68KΩ
1669	R8013	T5F	3001053330010	33KΩ
1670	R8014	T6F	3001060000000	0Ω
1671	R8015	T6F	3001051030000	10KΩ
1672	R8035	T7F	3001051020010	1KΩ
1673	R8036	T7F	3001051020010	1KΩ
1674	R8038	T7F	3001051020010	1KΩ
1675	R8039	T7F	3001051020010	1KΩ
1676	R8041	T7F	3001061000000	10Ω
1677	R8042	T7F	3001051040010	100KΩ
1678	R8043	T6F	3001051140010	110KΩ

No.	Ref No.	Print No.	Part No.	Description
1679	R8044	T7F	3001061000000	10Ω
1680	R8045	T7F	3001061000000	10Ω
1681	R8046	T7F	3001060000000	0Ω
1682	R8047	T7F	3001060000000	0Ω
1683	R8050	T7G	3001060000000	0Ω
1684	R8053	T7G	3001051030000	10KΩ
1685	R8063	B7F	3001051010000	100Ω
1686	R8064	B7H	3001050000000	0Ω
1687	R8065	B8F	3001054730000	47KΩ
1688	R8072	B7H	3001053300010	33Ω
1689	R8073	B8F	3001054730000	47KΩ
1690	R8074	B7G	3001051010000	100Ω
1691	R8076	B7H	3001050000000	0Ω
1692	R8077	B8G	3001050000000	0Ω
1693	R8078	B7H	3001054730000	47KΩ
1694	R8079	B7H	3001054730000	47KΩ
1695	R8092	B7G	3001050000000	0Ω
1696	R8093	B7G	3001050000000	0Ω
1697	R8097	B7G	3001051530000	15KΩ
1698	R8101	B7F	3001059130000	91KΩ
1699	R8103	B7G	3001053030010	30KΩ
1700	R8108	B7F	3001051030000	10KΩ
1701	R8109	B7F	3001051010000	100Ω
1702	R8110	B7G	3001051040010	100KΩ
1703	R8111	B7H	3001051030000	10KΩ
1704	R8112	B7H	3001051030000	10KΩ
1705	R8113	B7G	3001051020010	1KΩ
1706	R8114	B7H	3001051030000	10KΩ
1707	R8119	B8H	3001051010000	100Ω
1708	R8121	B7G	3001051020010	1KΩ
1709	R8124	B7G	3001059130000	91KΩ
1710	R8125	B8G	3001051020010	1KΩ
1711	R8126	B7G	3001051020010	1KΩ
1712	R8127	B7G	3001051030000	10KΩ
1713	R8128	B7G	3001051040010	100KΩ
1714	R8129	B7F	3001051010000	100Ω
1715	R8130	B7G	3001054720000	4.7KΩ
1716	R8131	B7F	3001059130000	91KΩ
1717	R8132	B7G	3001051020010	1KΩ
1718	R8133	B7G	3001051030000	10KΩ
1719	R8134	B7G	3001051040010	100KΩ
1720	R8135	B7G	3001051020010	1KΩ

No.	Ref No.	Print No.	Part No.	Description
1721	R8136	B5D	3001051020010	1KΩ
1722	R8137	B5D	3001051020010	1KΩ
1723	R8138	B5D	3001051020010	1KΩ
1724	R8139	B8H	3001052220010	2.2KΩ
1725	R8141	B5E	3001051020010	1KΩ
1726	R8144	B5E	3001051020010	1KΩ
1727	R8147	B5E	3001051020010	1KΩ
1728	R8154	B5D	3001051020010	1KΩ
1729	R8155	B5D	3001051020010	1KΩ
1730	R8168	B5E	3001050000000	0Ω
1731	R8169	B5E	3001050000000	0Ω
1732	R8171	B5E	3001050000000	0Ω
1733	R8175	B5D	3099061242020	12.4KΩ
1734	R8186	B5D	3001051050020	1MΩ
1735	R8187	B5E	3001051030000	10KΩ
1736	R8188	B5E	3001051030000	10KΩ
1737	R8192	B5E	3001053300010	33Ω
1738	R8194	B7F	3001051010000	100Ω
1739	R8195	B7H	3001051020010	1KΩ
1740	R8196	B7H	3001051020010	1KΩ
1741	R8198	T5C	3099074999010	49.9Ω
1742	R8199	B5C	3001071000000	10Ω
1743	R8200	T6C	3099074999010	49.9Ω
1744	R8201	T5B	3001067500090	75Ω
1745	R8202	T6C	3099074999010	49.9Ω
1746	R8203	T5C	3099074999010	49.9Ω
1747	R8204	T5B	3001067500090	75Ω
1748	R8206	T5D	3001051030000	10KΩ
1749	RN7005	B8C	3005051010010	100ΩJ
1750	RN8001	B7H	3005051010010	100ΩJ
1751	RN8002	B7G	3005051010010	100ΩJ
1752	RN8003	T7G	3005051010010	100ΩJ
1753	RN8004	T6F	3005051010010	100ΩJ
1754	RN8005	B5E	3005051010010	100ΩJ
1755	RN8006	B5E	3005051010010	100ΩJ
1756	RN8007	B4E	3005051010010	100ΩJ
1757	RN8008	B4E	3005051010010	100ΩJ
1758	RN8009	B5E	3005051010010	100ΩJ
1759	RN8010	B5E	3005051010010	100ΩJ
1760	RN8011	B5E	3005051010010	100ΩJ
1761	RT3001	T2D	3003061040000	100KΩ
1762	S3001	B3D	6203269000000	RD620 PA radiator

No.	Ref No.	Print No.	Part No.	Description
1763	SPG-T1	B5B	5499000001020	Three-level gas discharge tube 3RL090M-5/S
1764	SPG-T2	B6B	5499000001020	Three-level gas discharge tube 3RL090M-5/S
1765	T4001	B9F	3244599189000	Transmission coil 4BLH(020984189)
1766	T4002	B9F	3244599189000	Transmission coil 4BLH(020984189)
1767	U1000	T5H	3604019000000	【MSL3】PLL ICSKY72310
1768	U1002	T4H	3616010000000	Switch ICTS5A3159DCKR
1769	U1004	T4H	3616059000000	Switch ICFSA66P5X
1770	U1005	T9B	3616059000000	Switch ICFSA66P5X
1771	U1006	T8B	3604019000000	【MSL3】PLL ICSKY72310
1772	U1007	T9B	3616010000000	Switch ICTS5A3159DCKR
1773	U3001	T3G	3605025000020	Operational amplifier AD8566ARMZ
1774	U3002	T2G	3605002054590	Operational amplifier TA75W01FU(TE12L.F
1775	U3003	T3H	3605008005070	Operational amplifier NJM2904V
1776	U4001	T9F	3605002057090	Operational amplifier TA75S01F(TE85L.F)
1777	U5001	T8E	3603999000000	【MSL3】IF Processor ICAD9864
1778	U6001	T8C	3608006000000	Power management ICRP102N331B-TR-FFLDO
1779	U6002	T6B	3608010000350	[MSD3]Power management ICTPS5430DDABUCKDC-DC
1780	U6003	B6B	3608010000020	Power management ICTPS65021
1781	U6004	B6F	3609010000210	Reset ICTPS3705-33DR
1782	U6005	T8B	3608015000060	Power management ICXC6209F502PRLDO
1783	U6008	T8H	3608015000060	Power management ICXC6209F502PRLDO
1784	U6009	T5F	3608015000060	Power management ICXC6209F502PRLDO
1785	U6010	T4F	3608006000000	Power management ICRP102N331B-TR-FFLDO
1786	U6011	T5B	3608010000500	Power management ICTPS54340DDARDC-DC
1787	U6015	B6F	3605008005070	Operational amplifier NJM2904V
1788	U6023	T8H	3608015000210	Power management ICXC6209F332PRLDO
1789	U6105	T4D	3608011000090	【HMF】Power management ICLT1764AEQ#(TR)PBF
1790	U7001	T6G	3610010000010	【MSL4】MCUOMAP5912ZZG
1791	U7002	T5G	3612999000290	【MSL3】Memory MX69GL127EAXGW-90G
1792	U7003	T6H	3612044000010	Memory MT48H8M16LFB4-75IT
1793	U7004	T6E	3610010000010	【MSL4】MCUOMAP5912ZZG
1794	U7005	T6E	3612999000290	【MSL3】Memory MX69GL127EAXGW-90G
1795	U7006	T6E	3612044000010	Memory MT48H8M16LFB4-75IT
1796	U7007	B8C	3607023000150	Logic IC74AHCT594PW
1797	U7009	T7D	3699113000010	Level convertor SP3232EEARS232
1798	U7011	T5D	3699053000000	SmartSwitchAAT4618IGV-0.5-T1
1799	U7022	B7H	3607023000150	Logic IC74AHCT594PW
1800	U8003	T5F	3606010000010	D/A switching ICTLV5614IPWRG4
1801	U8007	T7F	3606010000010	D/A switching ICTLV5614IPWRG4
1802	U8009	B7F	3605008005070	Operational amplifier NJM2904V
1803	U8010	B7H	3613010000000	【MSL2】BB management ICTLV320AIC29IRGZRCODEC
1804	U8012	B5E	3609999007670	Connector-controller LAN9311i-NZW

No.	Ref No.	Print No.	Part No.	Description
1805	U8013	B7F	3605008005070	Operational amplifier NJM2904V
1806	U8101	B5C	5406000000120	Transformer HX1260POEStandard
1807	U8104	B5C	3310350000020	TVS Protection Diode SLVU2.8-4.TBT
1808	X1000	T5G	3804019250000	VCO DSA321SDA(VC-TCXO)
1809	X1001	T8C	3804019250000	VCO DSA321SDA(VC-TCXO)
1810	X7001	T7E	3701019250040	Crystal oscillator DSB321SDA
1811	X7002	T6F	3701327610060	Crystal SSP-T7F
1812	X7003	T6D	3701327610060	Crystal SSP-T7F
1813	X8001	B5D	3701002560000	Crystal DSX321G-25.000
1814	Z4001	T9E	3802448540040	Crystal filter DSF753SDF

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