



EUCARAY® RMC 114 "A" Series

Technical Information

| | | |
|--|---------------------|---|
| • Size | | 1"1/4 |
| • Frequency range | MHz | 30 - 2800 |
| • Recommended Frequency bands | | Tunnel-GSM, DCS-1800, UMTS, WLAN |
| • Cable Type | | RMC (Radiated Mode Cable) |
| • Material | | Flame retardant polyolefin |
| • Slot design | | Groups of slots at short intervals |
| • Impedance | Ω | 50 +/- 2 |
| • Velocity Ratio | % | 88 |
| • Capacitance | pF/m (pF/ft) | 76 (23.2) |
| • Inner Conductor DC resistance | Ω/1000m (Ω/1000 ft) | 0.95 (0.29) |
| • Outer Conductor DC resistance | Ω/1000m (Ω/1000 ft) | 1.65 (0.5) |
| • Inner Conductor Material | | Smooth copper tube |
| • Dielectric Material | | Cellular polyethylene |
| • Outer Conductor Material | | Overlapping corrugated copper foil with slot groups |
| • Diameter Inner Conductor | mm (in) | 13.0 (0.512) |
| • Diameter Dielectric | mm (in) | 33.5 (1.319) |
| • Diameter over Jacket | mm (in) | 38.0 (1.496) |
| • Minimum Bending Radius, Single Bend | mm (in) | 350 (13.78) |
| • Cable Weight | kg/m (lb/ft) | 0.875 (0.588) |
| • Tensile Strength | daN (lbf) | 180 (397) |
| • Indication of Slot Alignment | | embossed line 180° opposite |
| • Storage Temperature | °C (°F) | -70 to +85 (-94 to +185) |
| • Installation Temperature | °C (°F) | -25 to +60 (-13 to +140) |
| • Operation Temperature | °C (°F) | -40 to +85 (-40 to +185) |
| • Longitudinal Loss and Coupling Loss ⁽¹⁾ | | |

| Frequency | Longitudinal Loss | | Coupling Loss | |
|-----------|--------------------|--|---------------|-----------|
| | dB/100m (dB/100ft) | | C50% (dB) | C95% (dB) |
| 75 MHz | 0.85 (0.26) | | 64 | 74 |
| 150 MHz | 1.21 (0.37) | | 69 | 79 |
| 225 MHz | 1.50 (0.46) | | 61 | 64 |
| 450 MHz | 2.18 (0.66) | | 68 | 73 |
| 900 MHz | 3.18 (0.97) | | 64 | 69 |
| 1800 MHz | 5.36 (1.63) | | 59 | 65 |
| 1900 MHz | 5.76 (1.76) | | 59 | 65 |
| 2200 MHz | 7.36 (2.24) | | 59 | 65 |
| 2400 MHz | 8.86 (2.70) | | 52 | 57 |
| 2600 MHz | 10.80 (3.29) | | 55 | 67 |
| 2700 MHz | 11,97 (3,65) | | 55 | 67 |

| | | |
|---------------------------------------|---------|---------------------------------------|
| • Resonant Frequencies | MHz | 199, 597, 995, 1393, 1791, 2189, 2587 |
| • Recommended Clamp Spacing | m (ft) | 1.2 (3.94) |
| • Distance to Wall Recommended / Min. | mm (in) | 80 - 180 (3.15 - 7.00) / 50 (1.96) |

The above stated values are nominal values and subject to manufacturing tolerances as follows: Longitudinal Loss +/- 5 % and Coupling Loss +/- 5 dB.

As with any radiating cable, the performance in building or tunnel may deviate from figures measured according to the IEC 61196-4 standard.

¹⁾ Measured in tunnel according to **IEC 61196-4 - Ground Level Method**.

Distance = 2m. C50 & (C95) are the average coupling losses with 50% (95%) probability calculated in accordance with the standard.

Coupling loss measurements taken in accordance with IEC 61196-4 - Free Space Method are available on request.

All information on this datasheet is subject to change without notice.