

EUCARAY®Radiating Cables



EUCARAY® RMC 114 "A" Series

1-1/4" radiating cable covering a wide frequency range and applications

Radiating Cables

Product Description

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Features and Benefits

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Certification and Fire Behaviour

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Ordering Information

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"Á/[[|K <u>SPTC50R114E</u>

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EUCARAY® Radiating Cables



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 	$\Omega/1000$ m ($\Omega/1000$ ft)	0.95 (0.29)
 Outer Conductor DC resistance 	$\Omega/1000$ m ($\Omega/1000$ 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	Couplin	ng 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.

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.

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