RC400-HLFR

PRODUCT DESCRIPTION

Slots in the copper outer conductor allow a controlled portion of the internal RF energy to be radiated into the surrounding environment. Conversely, a signal transmitted near the cable will couple into the slots and be carried along the cable length.

FEATURES and BENEFITS

- From 30 MHz to 2700 MHz with resonant frequencies
- Robust Cable, with low bending radius
- Main Applications: In-Building; LTE, WLAN
- Specially designed for WiFi 2.4 GHz
- Fulfils the requirements of EN 45545-2:2013

FIRE BEHAVIOUR

- Low corrosive gas emission acc. to IEC 60754-2
- Flame retardant acc. to IEC 60332-1-2 and IEC 60332-3-25
- Low smoke emission acc. to IEC 61034[2)]

TECHNICAL FEATURES

• Size		1/4"
• Previous Model Number		n/a
• Frequency Range	MHz	30 - 3000
• Recommended for Frequency	MHz	2400 MHz WiFi
• Cable Type		RMC (Radiated Mode Cable)
• Jacket		HLFR (Halogen Free Low Smoke Flame Retardant)
• Slot Design		Groups of Slots at short intevals
• Impedance	Ω	50 +/- 2
• Velocity Ratio	%	85
• Capacitance	pF/m	78
• Inner Conductor dc Resistance	Ω/1000 m (Ω/1000 ft)	4.30 (1.31)
• Outer Conductor dc Resistance	Ω/1000 m (Ω/1000 ft)	6.8 (2.07)
• Inner Conductor Material		Copper clad aluminium wire
• Dielectric Material		Cellular polyethylene
• Outer Conductor Material		Overlapping copper foil, with slot groups, bonded to the jacket

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TECHNICAL FEATURES (continued)

• Diameter Inner Conductor	mm (in)	2.83 (0.111)
• Diameter Dielectric	mm (in)	7.3 (0.29)
• Diameter over Jacket	mm (in)	10.2 (0.40)
• Minimum Bending Radius, Singel bend	mm (in)	10 (3.9)
• Cable Weight	kg/m (lb/ft)	0.110 (0.091)
• Tensile Strength	daN (lb)	27 (61)
• 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 +65 (-40 to +149)
• Longitudinal Loss and Coupling Loss [1]		

Frequency	Longitudinal Loss	Coupling Loss	
	dB/100 m (dB/100 ft)	C50% [dB]	C95% [dB]
470 MHz	8.7 (2.63)	72	76
870 MHz	12.2 (3.72)	67	74
1800 MHz	18.4 (5.60)	63	69
2200 MHz	20.6 (6.29)	64	70
2400 MHz	21.7 (6.62)	61	66

• Resonant Frequencies	MHz	210, 630, 1050, 1470, 1890, 2310, 3150
• Clamp Spacing Recommended / Maximum	m (ft)	0.5 (1.64) / 1.20 (3.90)
• Distance to Wall Recommended / Minimum	mm (in)	80 - 180 (3.15 - 7.00) / 50 (1.96)

[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.

The above stated values are nominal values and subject to manufacturing tolerances as follows: Longitudinal Loss +/-5 % and Coupling Loss +/- 3dB.

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

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

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