



EUCARAY® RMC 78-CL "A" Series

7/8" radiating cable optimized for 4G and WLAN applications.

Radiating Cables

Eupen EUCARAY® radiating cables have been developed to provide RF-coverage for wireless applications in confined areas. They provide homogeneous and continuous RF-coverage, and allow simultaneous transmission of multiple wireless services. EUCARAY® radiating cables are engineered and produced in Belgium to highest quality standards for best performance and longest lifetime.

Product Description

The EUCARAY® RMC 78-CL "A" Series radiating cable offers best performance to cost relation for high frequencies. The size of 7/8" features low loss.



Features and Benefits

- From 30 to 2500 MHz with resonant frequencies*
- Robust Cable
- Main Applications: WLAN - 2400-2485 MHz

Certification and Fire Behaviour

- Halogen-free, Low-smoke and Flame-retardant outer jacket:
- Low corrosive gas emission acc. to IEC 60754-2
 - Flame retardant acc. to IEC 60332-1-2 and IEC 60332-3 Cat. C
 - Low smoke emission acc. to IEC 61034
 - Reaction to fire according EN60332-1-2 E_{ca}
 - Compliant to EN 50575

Ordering Information

Ordering name: **RMC 78-CL-HLFR "A" Series**

Recommended connectors and cable preparation tool:

- 7-16 Female: [716FR78A](#)
- 4.3-10 Female: [43FR78A](#)
- N Type: [NF50R78A; NM50R78A](#)
- Tool: [SPTC50R78](#)

¹⁾ EUCARAY® achieves low coupling losses due to the patented slot design. Resonant frequencies are narrow-band VSWR peaks that usually occur in non-used bands of the radio-spectrum. Their amplitude generally decreases the higher the order.

More information under: www.radiating-cables.com

www.eupen.com



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Technical Information

• Size		7/8"
• Frequency range	MHz	30 - 2500
• Recommended Frequency bands		WLAN - 2400-2485 MHz
• 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)	72 (22)
• Inner Conductor DC resistance	Ω/1000m (Ω/1000 ft)	1.63 (0.5)
• Outer Conductor DC resistance	Ω/1000m (Ω/1000 ft)	2.50 (0.76)
• 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)	9.2 (0.362)
• Diameter Dielectric	mm (in)	23.5 (0.925)
• Diameter over Jacket	mm (in)	27.0 (1.063)
• Minimum Bending Radius, Single Bend	mm (in)	350 (13.78)
• Cable Weight	kg/m (lb/ft)	0.400 (0.269)
• Tensile Strength	daN (lbf)	130 (287)
• 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 dB/100m (dB/100ft)	Coupling Loss	
		C50% (dB)	C95% (dB)
1800 MHz	6.27 (1.91)	64	69
2300 MHz	8.31 (2.53)	64	72
2400 MHz	8.69 (2.65)	57	61
2485 MHz	9.60 (2.93)	57	61

• Resonant Frequencies	MHz	158, 474, 790, 1106, 1422, 1738, 2054, 2370
• Recommended Clamp Spacing	m (ft)	1 (3.28)
• 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.