

RG142 LSFH, 50 Ohm, 8 GHz, 105°C, RADOX® jacket

RADOX_RF_142

Properties

- Halogen free alternative to RG_142
- Suitable for use in applications up to 8 GHz
- Low smoke
- Ozone, UV and weathering resistance
- Railway qualified
- HUBER+SUHNER RADOX® jacket material



Construction			
Component	Material	Detail	Diameter
Centre conductor	Copper, Silver plated	Wire	0.95 mm
Dielectric	SPEX (Crosslink Foam PE)		2.98 mm
Outer conductor	Copper, Silver plated	Braid, 97%	3.58 mm
Outer conductor	Copper, Silver plated	Braid, 95%	4.18 mm
Jacket	RADOX EM104	RAL 9005 - bk	5.34 mm +/- 0.06 mm

Electrical data	
Impedance	50 Ω +/-2 Ω
Operating frequency	$\leq$ 8 GHz
Capacitance	94.5 pF/m
Velocity of signal propagation	70.9 %
Signal delay	4.7 ns/m
Screening effectiveness	$\geq$ 75 dB at frequency 0.01 GHz ... 5GHz
Insulation resistance	10000000 M Ω *m
Operating Voltage (at sea level)	$\leq$ 2.5 kVrms
Test voltage (50 Hz/1 min)	$\leq$ 5 kVrms

Mechanical data	
Weight	approx. 57 g/m
Static bending radius	$\geq$ 30 mm
Repeated bending radius	50 mm

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Environmental data	
Operation temperature	-40 °C ... 105 °C
Installation temperature	-20 °C ... 60 °C
Flame propagation standard	EN 60332-1-2 EN 50305, 9.1.2
Fire characteristics	free of halogenes, acc. standard IEC 60754
Smoke test	EN 61034-2
UV resistance	ISO 4892-2A

Additional Information

EN 45545 compliant Hazard level for indoor cables: HL3 An operating temperature of -55°C is feasible for static applications. Extended to 8GHz, to support typical WiFi6E applications.

Suitable connectors

Cable group	U9
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Ordering information

Item number	Item description	Available as assembly only
85023684	RADOX_RF_142	No

Power Matrix

Calculation: typical Attenuation [formula: $(a \cdot f^{0.5} + b \cdot f)$] and maximum Power CW [formula: $(p/f^{0.5})$]

a coefficient typical =	0.365	b coefficient typical =	0.142
fmax =	8	P at 1 GHz =	225
Frequency GHz	Nom. attenuation (dB/m)	Nom. attenuation (dB/ft)	CW power (W)
	sea level 25°C ambient temperature	sea level 25°C ambient temperature	sea level 40°C ambient temperature
0.10	0.130	0.040	712
0.20	0.192	0.058	503
0.30	0.243	0.074	411
0.40	0.288	0.088	356
0.60	0.368	0.112	290
0.80	0.440	0.134	252
1.00	0.507	0.155	225
1.20	0.570	0.174	205
1.40	0.631	0.192	190
1.60	0.689	0.210	178
1.80	0.745	0.227	168
2.00	0.800	0.244	159
2.50	0.932	0.284	142
3.00	1.058	0.323	130
3.50	1.180	0.360	120
4.00	1.298	0.396	112
5.00	1.526	0.465	101
6.00	1.746	0.532	92
7.00	1.960	0.597	85
8.00	2.168	0.661	80

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