

RG142 LSFH, 50 Ohm, 6 GHz, 105°C, ø5 mm, RADOX® jacket

ENVIROFLEX_142

Properties

- Halogen free alternative to RG cables
- Low smoke
- Ozone, UV and weathering resistance
- UL AWM style 3651



Construction			
Component	Material	Detail	Diameter
Centre conductor	Copper, Silver plated	Wire	0.95 mm
Dielectric	SPEX (Crosslink Foam PE)		2.95 mm
Outer conductor	Copper, Silver plated	Braid, 97%	3.58 mm
Outer conductor	Copper, Silver plated	Braid, 95%	4.16 mm
Jacket	RADOX	black/bl line	5 mm +/- 0.1 mm

Electrical data	
Impedance	50 Ω +/-2Ω
Operating frequency	≤ 6 GHz
Capacitance	94.5 pF/m
Velocity of signal propagation	70.9 %
Signal delay	4.7 ns/m
Screening effectiveness	75 dB at frequency 5GHz
Insulation resistance	10000000 MΩ*m
Inner conductor resistance	23.655 Ω/km
Outer conductor resistance	9.5 Ω/km
Operating Voltage (at sea level)	≤ 2.5 kVrms
Voltage Rating UL	300 V
Phase vs temperature	9000 ppm within the temperature range -40 ... 100 °C
Test voltage (50 Hz/1 min)	≤ 5 kVrms

Mechanical data	
Weight	approx. 60 g/m
Static bending radius	≥ 30 mm
Repeated bending radius	50 mm
Dynamic bending radius	< 30 mm

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Mechanical data	
Abrasion test	MIL-T-81490 - §4.7.19 - prod. II - modified

Environmental data	
Operation temperature	-40 °C ... 105 °C
Installation temperature	-20 °C ... 60 °C
Flame propagation standard	IEC 60332-1-2
	UL 1581 § 1100
	IEC 60332-2
	EN 50305, 9.1.2
Fire characteristics	free of halogenes, acc. standard IEC 60754
Smoke test	EN 61034-2
Ageing test	MIL-C-17 § 4.8.16
Cold bend test	MIL-C-17 § 4.8.19
UV resistance	IEC 60068-2-5, proc. C
Thermal stress test	IEC 61196-1 § 10.9

Material compliance			
Item number	Directive / Regulation	Rating	Exemptions / Details
22512168	RoHS 2011/65/EU and (EU) 2015/863	Compliant without exemption	

Additional Information
Railway certificates discontinued by end of 2017. Replacement type for railway: RADOX_RF_142.

Suitable connectors	
Cable group	U9

Ordering information		
Item number	Item description	Available as assembly only
22512168	ENVIROFLEX_142	No

Power Matrix			
Calculation: typical Attenuation [formula: (a*f ^{0.5} + b*f)] and maximum Power CW [formula: (p/f ^{0.5})]			
a coefficient typical =	0.365	b coefficient typical =	0.142
fmax =	6	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

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Power Matrix			
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

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