

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

ENVIROFLEX_142

Properties

- Halogen free alternative to RG cables
- Low smoke
- Flame retardant
- UL AWM style 3651



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

Electrical data	
Impedance	50 Ω +/-2Ω
Operating frequency	≤ 6 GHz
Capacitance	94.5 pF
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
Operating Voltage (at sea level)	≤ 2.5 kV
Voltage Rating UL	300 V
Phase vs temperature	9000 ppm at temperature -40 ... 100°C
Test voltage (50 Hz/1 min)	≤ 5 kV

Mechanical data	
Weight	approx. 60 g/m
Static bending radius	≥ 30 mm
Repeated bending radius	50 mm
Dynamic bending radius	< 30 mm
Abrasion test	MIL-T-81490 - §4.7.19 - prod. II - modified

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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
Fire characteristics	EN 50305, 9.1.2
	free of halogenes, acc. standard IEC 60754
	EN 61034-2
Smoke test	EN 61034-2
Ageing test	MIL-C-17 § 4.8.16
Cold bend test	MIL-C-17 § 4.8.19
Thermal stress test	IEC 60068-2-5, proc. C
	IEC 61196-1 § 10.9

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 =	6.0	P at 1 GHz =	225.0
Frequency	Nom. attenuation	Nom. attenuation Max.	CW power
GHz	(dB/m)	(dB/ft)	(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	0.059	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	0.322	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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