

RADOX OFL - RG142 LSFH, 50 Ohm, 8 GHz, 105°C, ø5.34 mm, RADOX® jacket

RADOX OFL RF 142

Properties

- Flexible and lightweight
- Suitable for use in applications up to 8 GHz
- Flame retardant
- Oil and mud resistance
- Oil and gas 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 +/- 2Ω
Operating frequency	≤ 8 GHz
Capacitance	94.5 pF/m
Velocity of signal propagation	70.9 %
Signal delay	4.7 ns/m
Screening effectiveness	≥ 75 dB at frequency 0.01 GHz ... 5GHz
Insulation resistance	10000000 MΩ*m
Operating Voltage (at sea level)	≤ 2.5 kVrms
Test voltage (50 Hz/1 min)	≤ 5 kVrms

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

Environmental data	
Operation temperature	-40 °C ... 105 °C
Installation temperature	-20 °C ... 60 °C
Oil and mud resistance	IEC 60092-360 NEK TS 606: 2016 (cat. a/b/c, cat. d on request)*

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Environmental data	
Flame propagation standard	(acc. construction) EN 60332-1-2 (acc. construction) EN 50305, 9.1.2
Fire characteristics	free of halogenes, acc. standard IEC 60754
Smoke test	(acc. construction) EN 61034-2
UV resistance	ISO 4892-2A

Material compliance			
Item number	Directive / Regulation	Rating	Exemptions / Details
85182100	RoHS 2011/65/EU and (EU) 2015/863	Compliant without exemption	
	REACH 1907/2006 Article 33 SVHC	Free of SVHC >0,1%	

Additional Information

* Tested with BASEC (UK).

Flame propagation tested according to IEC 60079-1:2014 (Equipment protection by flameproof enclosures "d") with CCG A2F, gland size 0, part no. 054100, passed IIB/IIC gas test.

Suitable connectors	
Cable group	U9

Ordering information		
Item number	Item description	Available as assembly only
85182100	RADOX OFL RF 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 =	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

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Power Matrix			
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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