Data Sheet

HUBER+SUHNER

Flexible RF cable
RADOX_RF_142 Item: 85023684

Description

RADOX RF: Highly flame retardant LSFH alternatives to RG cables

RG142 LSFH, 50 Ohm, 8 GHz, 105°C, ø5.34 mm, RADOX® jacket, Flame retardant, Railway qualified

Technical Data

Construction

	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

Print: HUBER+SUHNER RADOX RF 142 50 Ohm (UL logo) AWM Style 3651 (production order number)

Electrical Data

Impedance		50 Ω +/- 2
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 (up to 5 GHz)
Operating voltage		≤ 2.5 kV_{rms} (at sea level)
Test voltage		5 kV_{rms} (50 Hz/1 min)

Mechanical Data

Weight		5.7 kg/100 m
Min. bending radius	static	30 mm
	repeated (for ≤ 3000 bendings)	50 mm

Environmental Data

Temperature range	-40 °C ... +105 °C
Installation temperature	-20 °C... +60 °C
Flame propagation test	EN 60332-1-2, EN 50305, 9.1.2
Smoke density test	EN 61034-2
Halogen test	IEC 60754
Halogen free	Yes
2011/65/EU (RoHS - including 2015/863 and 2017/2102)	compliant
1907/2006/EC (REACH)	compliant
2000/53/EC (ELV)	compliant
2012/19/EU (WEEE)	no special marking needed

Additional Information

EN 45545 compliant Hazard level for indoor cables: HL3 NFPA-130 compliant An operating temperature of -55°C is feasible for static applications. Extended to 8GHz, to support typical WiFi6E applications.

Remarks

(For details refer to the HUBER+SUHNER RF CABLES GENERAL CATALOGUE or contact your nearest HUBER+SUHNER partner)

Suitable Connectors

Cable group	U9 3 mm / 50 Ohm

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Matrix typical Attenuation [formula: (a*f^0.5 + b*f)] and maximum Power CW [formula: (p/f^0.5)]
Coefficients:

a = 0.365	b = 0.142	f_{max} = 8	P at 1GHz = 225

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
0.4	0.29	0.088	356
0.8	0.44	0.134	252
1.2	0.57	0.174	205
1.6	0.69	0.210	178
2.0	0.8	0.244	159
2.4	0.91	0.276	145
2.8	1.01	0.307	134
3.2	1.11	0.337	126
3.6	1.2	0.367	119
4.0	1.3	0.396	113
4.4	1.39	0.424	107
4.8	1.48	0.451	103
5.2	1.57	0.479	99
5.6	1.66	0.506	95
6.0	1.75	0.532	92
6.4	1.83	0.558	89
6.8	1.92	0.584	86
7.2	2.0	0.610	84
7.6	2.09	0.636	82
8.0	2.17	0.661	80