Data Sheet

HUBER+SUHNER

Coaxial Cable
SUCOFEED_1/4_HF_FR

Description

Copper outer conductor, 50 Ohm, 18 GHz, 85°C, ø7.6 mm, LSFH jacket, Flame retardant



Technical Data

Construction

	Material	Detail	Diameter
Centre conductor	Copper clad Aluminum	Wire	typ. 1.9 mm
Dielectric	SPE (Foamed Polyethylene)		typ. 4.6 mm
Outer conductor	Copper	Tube, corrugated100%	typ. 6.4 mm
Jacket	LSFH (modified polyethylene)	RAL 9011 - graphite black	7.6 mm +/- 0.4

Print: HUBER+SUHNER_SUCOFEED_1/4_HF_FR_#batch-number#_#metric-length#

Electrical Data

Impedance	50 Ω +/- 1
Operating Frequency	≤ 18 GHz
Capacitance	typ. 79.7 pF/m
Inductance	typ. 0.2 µH/m
Velocity of signal propagation	typ. 83.5 %
Signal delay	typ. 4 ns/m
Insulation resistance	≥ 5 x 10^6 MΩm
Screening effectiveness	≥ 120 dB
Operating voltage	≤ 0.6 kVrms (at sea level)
Test voltage	1.3 kVrms (50 Hz/1 min)$_{rms}$
Outer conductor resistance DC	≤ 6.5 Ω/km
Inner conductor resistance DC	≤ 9.8 Ω/km

Mechanical Data

Weight		≤ 8.7 kg/100 m
Bending Radius	static	≥ 25 mm
Bending Radius	repeated (for ≤ 15 bendings)	≥ 50 mm
Tensile strength		≤ 300 N
Bending force moment		≤ 1.1 Nm

Environmental Data

Temperature range	-40 °C... +85 °C
Installation temperature	-25 °C... +60 °C
Flammability	IEC 60332-1, IEC 60332-3 (A),
Smoke density	IEC 61034
Halogen test	IEC 60754-2
2011/65/EU (RoHS - including 2015/863 and 2017/2102)	compliant

Additional Information

Remarks

(For details contact your nearest HUBER+SUHNER partner)

Suitable Connectors

Cable group	M5 5 mm / 50 Ohm

Suitable Tools

Suitable Grounding Kit

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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 =	0.181619118 typ.	b =	0.01380882 typ.	$f_{max.}$ =	18	P ≤ at 1GHz =	290

Frequency (GHz)	Nom. attenuation (dB / 100 m) sea level 20° C ambient temperature	Nom. attenuation (dB / 100 ft) sea level 20° C ambient temperature	Max. CW power (watt) sea level 40° C ambient temperature
0,100	5,88	1,79	917
0,150	7,24	2,21	749
0,200	8,40	2,56	648
0,400	12,04	3,67	459
0,450	12,80	3,90	432
0,500	13,53	4,12	410
0,700	16,16	4,93	347
0,800	17,35	5,29	324
0,900	18,47	5,63	306
1,000	19,54	5,96	290
1,500	24,32	7,41	237
1,700	26,03	7,93	222
1,800	26,85	8,18	216
2,000	28,45	8,67	205
2,200	29,98	9,14	196
2,500	32,17	9,80	183
2,800	34,26	10,44	173
3,300	37,55	11,44	160
3,500	38,81	11,83	155
4,000	41,85	12,75	145
5,000	47,52	14,48	130
6,000	52,77	16,08	118
7,000	57,72	17,59	110
8,000	62,42	19,02	103
8,800	66,03	20,12	98
10,200	72,09	21,97	91

Matrix typical Return Loss

Frequency Range (MHz)	Frequency Range (MHz)	Frequency Range (MHz)	Frequency Range (MHz)
380 to 470	806 to 960	1710 to 2200	5 to 3000
typ. 28.5 dB	typ. 26.9 dB	typ. 25.6 dB	typ. 21 dB

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