Data Sheet

Flexible RF cable
ENVIROFLEX_178_D

Description

Enviroflex: LSFH alternatives to RG cables

RG178D/RD178 LSFH, 50 Ohm, 6 GHz, 105°C, ø2.45 mm, RADOX® jacket, Flame retardant, UL AWM style 3651



Technical Data

Construction

	Material	Detail	Diameter
Centre conductor	Steel, Copper+Silver plated	Strand-07	0.305 mm
Dielectric	SPEX (Crosslink Foam PE)		0.82 mm
Outer conductor	Copper, Silver plated	Braid, 96%	1.27 mm
Outer conductor	Copper, Silver plated	Braid, 92 %	1.72 mm
Jacket	RADOX	RAL 5012 - bl	2.45 mm +/- 0.07

Print: HUBER+SUHNER ENVIROFLEX 178 D 50 Ohm (UL logo) AWM Style 3651 (PA no.)

Electrical Data

Impedance		50 Ω +/- 2
Operating Frequency		6 GHz
Capacitance		94.5 pF/m
Velocity of signal propagation		70.1 %
Signal delay		4.72 ns/m
Screening effectiveness		≥ 60 dB (up to 6 GHz)
Operating voltage		≤ 1 kV_{rms} (at sea level)
Test voltage		2 kV_{rms} (50 Hz/1 min)
Voltage Rating UL		300 V
Phase vs Temperature	-40°C... + 100°C	8400 ppm
Phase vs Bending		0.7 °/GHz

Mechanical Data

Weight		1.12 kg/100 m
Min. bending radius	static	5 mm
	repeated (for ≤ 30000 bendings)	20 mm
	dynamic	20 mm

Environmental Data

Temperature range	-40 °C ... +105 °C
Temperature rating UL	105 °C
Installation temperature	-20 °C... +60 °C
Cold bend test	MIL-C-17 § 4.8.19
Ageing test	MIL-C-17 § 4.8.16
Solar radiation test	IEC 60068-2-5, proc. C
Uv resistance test	IEC 60068-2-5, proc. C
Flame propagation test	UL 1581 § 1100,
Halogen test	IEC 60754
Halogen free	Yes
2011/65/EU (RoHS)	compliant
2006/1907/EC (REACH)	compliant

Additional Information

Ordering Information

Order as	ENVIROFLEX_178_D

Remarks

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

Suitable Connectors

Cable group	X1 1 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 = 1.4187	b = 0.207	f_{max} = 6	P at 1GHz = 60

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
0,3	0,84	0,256	110
0,6	1,22	0,373	77
0,9	1,53	0,467	63
1,2	1,8	0,549	55
1,5	2,05	0,624	49
1,8	2,28	0,694	45
2,1	2,49	0,759	41
2,4	2,69	0,821	39
2,7	2,89	0,881	37
3,0	3,08	0,938	35
3,3	3,26	0,994	33
3,6	3,44	1,048	32
3,9	3,61	1,100	30
4,2	3,78	1,151	29
4,5	3,94	1,201	28
4,8	4,1	1,250	27
5,1	4,26	1,298	27
5,4	4,41	1,345	26
5,7	4,57	1,392	25
6,0	4,72	1,438	24

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