Data Sheet

HUBER+SUHNER

Flexible RF cable
ENVIROFLEX_316_D-01 Item: 84011098

Description

Enviroflex: LSFH alternatives to RG cables

RG316D/RD316 LSFH (black jacket), 50 Ohm, 6 GHz, 105°C, ø3.16 mm, RADOX® jacket, Flame retardant, UL AWM style 3651

Technical Data

Construction

	Material	Detail	Diameter
Centre conductor	Steel, Copper+Silver plated	Strand-07	0.54 mm
Dielectric	SPEX (Crosslink Foam PE)		1.53 mm
Outer conductor	Copper, Silver plated	Braid, 96%	1.99 mm
Outer conductor	Copper, Silver plated	Braid, 90 %	2.44 mm
Jacket	RADOX	RAL 9005 - bk	3.16 mm +/- 0.08

Print: HUBER+SUHNER ENVIROFLEX 316 D-01 50 Ohm (UL logo) AWM Style 3651 (production order number)

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		≥ 70 dB (up to 5 GHz)
Operating voltage		≤ 1.3 kV_{rms} (at sea level)
Test voltage		3 kV_{rms} (50 Hz/1 min)
Voltage Rating UL		300 V
Phase vs Temperature	-40°C... + 100°C	10000 ppm
Phase vs Bending		0.7 °/GHz

Mechanical Data

Weight		2.1 kg/100 m
Min. bending radius	static	5 mm
	repeated (for ≤ 30000 bendings)	30 mm
	dynamic	30 mm
Tensile strength		≤ 150 N
Abrasion test	MIL-T-81490 - §4.7.19 - prod. II - modified	

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
Thermal stress test	IEC 61196-1 § 10.9
Uv resistance test	IEC 60068-2-5, proc. C
Flame propagation test	EN 60332-1-2, UL 1581 § 1100
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
Flex life test	MIL-T-81490 - §4.7.15 - prod. II - modified

Additional Information

Remarks

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

Suitable Connectors

Cable group	U4 2 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 =	0.7648	b =	0.1301	f_{max} =	6	P at 1GHz =	110

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	0.46	0.140	201
0.6	0.67	0.204	142
0.9	0.84	0.257	116
1.2	0.99	0.303	100
1.5	1.13	0.345	90
1.8	1.26	0.384	82
2.1	1.38	0.421	76
2.4	1.5	0.456	71
2.7	1.61	0.490	67
3.0	1.71	0.523	64
3.3	1.82	0.554	61
3.6	1.92	0.585	58
3.9	2.02	0.615	56
4.2	2.11	0.644	54
4.5	2.21	0.673	52
4.8	2.3	0.701	50
5.1	2.39	0.729	49
5.4	2.48	0.756	47
5.7	2.57	0.783	46
6.0	2.65	0.809	45