DATA SHEET

RG316D LSFH, 50 Ohm, 6 GHz, 105°C, ø3.16 mm, RADOX® jacket

ENVIROFLEX_316_D

Properties

- Halogen free alternative to RG cables
- Low smoke
- Ozone, UV and weathering resistance
- UL AWM style 3651
- CPR qualified

Construction			
Component	**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 mm

Electrical data	
Impedance	50 Ω +/-2Ω
Operating frequency	≤ 6 GHz
Capacitance	94.5 pF/m
Velocity of signal propagation	70.1 %
Signal delay	4.72 ns/m
Insulation resistance	10000000 MΩ*m
Inner conductor resistance	269 Ω/km
Outer conductor resistance	17 Ω/km
Operating Voltage (at sea level)	≤ 1.3 kVrms
Voltage Rating UL	300 V
Test voltage (50 Hz/1 min)	≤ 3 kVrms

Mechanical data	
Weight	approx. 21 g/m
Static bending radius	≥ 5 mm
Repeated bending radius	30 mm (bendings, up to 3000)
Dynamic bending radius	≤ 30 mm
Abrasion test	MIL-T-81490 - §4.7.19 - prod. II - modified

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Environmental data	
Operation temperature	-40 °C ... 105 °C
Installation temperature	-20 °C ... 60 °C
CPR class	Eca
Flame propagation standard	EN 60332-1-2
	UL 1581 § 1100
	EN 50305, 9.1.2
	FAR 25.869
Fire characteristics	free of halogenes, acc. standard IEC 60754
Smoke test	EN 61034-2
Ageing test	MIL-C-17 § 4.8.16
Cold bend test	MIL-C-17 § 4.8.19
UV resistance	IEC 60068-2-5, proc. C
Thermal stress test	IEC 61196-1 § 10.9

Material compliance			
Item number	Directive / Regulation	Rating	Exemptions / Details
22512281	RoHS 2011/65/EU and (EU) 2015/863	Compliant without exemption	
	REACH 1907/2006 Article 33 SVHC	Free of SVHC >0,1%	

Suitable connectors	
Cable group	U4

Ordering information		
Item number	Item description	Available as assembly only
22512281	ENVIROFLEX_316_D	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 =	**0.7648**	b coefficient typical =	**0.1301**
fmax =	**6**	P at 1 GHz =	**110**
Frequency	**Nom. attenuation**	**Nom. attenuation**	**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
0.10	0.255	0.078	348
0.20	0.368	0.112	246
0.30	0.458	0.140	201
0.40	0.536	0.163	174
0.60	0.670	0.204	142
0.80	0.788	0.240	123
1.00	0.895	0.273	110
1.20	0.994	0.303	100
1.40	1.087	0.331	93
1.60	1.176	0.358	87
1.80	1.260	0.384	82
2.00	1.342	0.409	78
2.50	1.535	0.468	70
3.00	1.715	0.523	64
3.50	1.886	0.575	59

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Power Matrix			
4.00	2.050	0.625	55
5.00	2.361	0.720	49
6.00	2.654	0.809	45

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