

RG178 LSFH, 50 Ohm, 3 GHz, 105°C, ø1.84 mm, RADOX® jacket

ENVIROFLEX_178

Properties

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



Construction			
Component	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, 95%	1.27 mm
Jacket	RADOX	RAL 5010 - bl	1.84 mm +/- 0.07 mm

Electrical data	
Impedance	50 Ω +/-2Ω
Operating frequency	≤ 3 GHz
Capacitance	94.5 pF/m
Velocity of signal propagation	70.7 %
Signal delay	4.71 ns/m
Screening effectiveness	40 dB at frequency 0.03 GHz ... 3GHz
Insulation resistance	10000000 MΩ*m
Inner conductor resistance	747 Ω/km
Outer conductor resistance	50 Ω/km
Operating Voltage (at sea level)	≤ 1 kVrms
Voltage Rating UL	300 V
Phase vs temperature	8400 ppm within the temperature range -40 ... 100 °C
Phase vs bending	0.7 °/GHz
Test voltage (50 Hz/1 min)	≤ 2 kVrms

Mechanical data	
Weight	approx. 6.5 g/m
Static bending radius	≥ 5 mm
Repeated bending radius	20 mm
Dynamic bending radius	< 30 mm

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Environmental data	
Operation temperature	-40 °C ... 105 °C
Installation temperature	-20 °C ... 60 °C
Flame propagation standard	UL 1581 § 1100
Fire characteristics	free of halogenes, acc. standard IEC 60754
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
Solar radiation	IEC 60068-2-5, proc. C

Material compliance			
Item number	Directive / Regulation	Rating	Exemptions / Details
23010656	RoHS 2011/65/EU and (EU) 2015/863	Compliant without exemption	

Suitable connectors	
Cable group	U1

Ordering information		
Item number	Item description	Available as assembly only
23010656	ENVIROFLEX_178	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 =	1.4067	b coefficient typical =	0.2229
fmax =	3	P at 1 GHz =	60
Frequency GHz	Nom. attenuation (dB/m)	Nom. attenuation (dB/ft)	CW power (W)
	sea level 25°C ambient temperature	sea level 25°C ambient temperature	sea level 40°C ambient temperature
0.10	0.467	0.142	190
0.20	0.674	0.205	134
0.30	0.837	0.255	110
0.40	0.979	0.298	95
0.60	1.223	0.373	77
0.80	1.437	0.438	67
1.00	1.630	0.497	60
1.20	1.808	0.551	55
1.40	1.976	0.602	51
1.60	2.136	0.651	47
1.80	2.289	0.698	45
2.00	2.435	0.742	42
2.50	2.781	0.848	38
3.00	3.105	0.946	35

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