

RG178, 50 Ohm, 3 GHz, 200°C, Ø1.8 mm, FEP jacket

RG_178_B/U

Properties

- According to RG cable standard
- Excellent RF performance for precision applications
- Suitable for use in applications up to 3 GHz
- Extended temperature range



Construction			
Component	Material	Detail	Diameter
Centre conductor	Steel, Copper + Silver plated	Strand-07	0.31 mm
Dielectric	PTFE (Polytetrafluoroethylene)		0.83 mm
Outer conductor	Copper, Silver plated	Braid, 95%	1.33 mm
Jacket	FEP (Fluorinated ethylene propylene)	RAL 8015 - br	1.8 mm +/- 0.1 mm

Electrical data	
Impedance	50 Ω +/-2Ω
Operating frequency	≤ 3 GHz
Capacitance	97 pF/m
Velocity of signal propagation	69 %
Signal delay	4.84 ns/m
Screening effectiveness	40 dB at frequency 0.0001 GHz ... 1GHz
Insulation resistance	100000000 MΩ*m
Inner conductor resistance	742 Ω/km
Outer conductor resistance	53 Ω/km
Operating Voltage (at sea level)	≤ 0.5 kVrms
Test voltage (50 Hz/1 min)	≤ 1 kVrms

Mechanical data	
Weight	approx. 8.4 g/m
Static bending radius	≥ 10 mm
Repeated bending radius	18 mm
Dynamic bending radius	< 27 mm

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Environmental data	
Operation temperature	-65 °C ... 200 °C
Installation temperature	-20 °C ... 60 °C
Flame propagation standard	IEC 60332-3
Fire characteristics	contains halogene

Material compliance			
Item number	Directive / Regulation	Rating	Exemptions / Details
22510043	RoHS 2011/65/EU and (EU) 2015/863	Compliant without exemption	
	REACH 1907/2006 Article 33 SVHC	Free of SVHC >0,1%	

Additional Information
MIL reference: M17/93-RG178 and M17/93-00001

Suitable connectors
Cable group U1

Ordering information		
Item number	Item description	Available as assembly only
22510043	RG_178_B/U	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 =	1.414	b coefficient typical =	0.173
fmax =	3	P at 1 GHz =	52
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
0.20	0.667	0.203	116
0.40	0.963	0.294	82
0.60	1.199	0.365	67
0.80	1.403	0.428	58
1.00	1.587	0.484	52
1.20	1.757	0.535	47
1.40	1.915	0.584	44
1.60	2.065	0.630	41
1.80	2.208	0.673	39
2.00	2.346	0.715	37
3.00	2.968	0.905	30

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