

RG178D/RD178, 50 Ohm, 6 GHz, 200°C, ø2.4 mm, FEP jacket

K_01252_D

Properties

- Custom alternative to RG_178
- Suitable for use in applications up to 6 GHz
- Extended temperature range
- double shielded for better RF screening effectiveness



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
Outer conductor	Copper, Silver plated	Braid, 92%	1.83 mm
Jacket	FEP (Fluorinated ethylene propylene)	RAL 8015 - br	2.4 mm +/- 0.1 mm

Electrical data	
Impedance	50 Ω +/-2Ω
Operating frequency	≤ 6 GHz
Capacitance	97 pF/m
Velocity of signal propagation	69 %
Signal delay	4.84 ns/m
Screening effectiveness	80 dB at frequency 0.001 GHz ... 6GHz
Insulation resistance	100000000 MΩ*m
Inner conductor resistance	785.2 Ω/km
Operating Voltage (at sea level)	≤ 0.5 kVrms
Test voltage (50 Hz/1 min)	≤ 1 kVrms

Mechanical data	
Weight	approx. 15 g/m
Static bending radius	≥ 15 mm
Repeated bending radius	24 mm
Dynamic bending radius	< 36 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

Suitable connectors	
Cable group	X1

Ordering information		
Item number	Item description	Available as assembly only
22610061	K_01252_D	No

Power Matrix			
Calculation: typical Attenuation [formula: $(a \cdot f^{0.5} + b \cdot f)$] and maximum Power CW [formula: $(p/f^{0.5})$]			
a coefficient typical =	1.3	b coefficient typical =	0.3327
fmax =	6	P at 1 GHz =	111
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	0.648	0.197	248
0.40	0.955	0.291	176
0.60	1.207	0.368	143
0.80	1.429	0.436	124
1.00	1.633	0.498	111
1.20	1.823	0.556	101
1.40	2.004	0.611	94
1.60	2.177	0.663	88
1.80	2.343	0.714	83
2.00	2.504	0.763	78
4.00	3.931	1.198	56
6.00	5.181	1.579	45

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