

RG58, 50 Ohm, 1 GHz, 85°C, Ø4.95 mm, PVC jacket

RG_58_C/U

Properties

- According to RG cable standard
- Excellent RF performance for precision applications
- Suitable for use in application up to 1 GHz



Construction			
Component	Material	Detail	Diameter
Centre conductor	Copper, Tin plated	Strand-19, 96%	0.9 mm - 0.15 mm
Dielectric	PE (Polyethylene)		2.95 mm
Outer conductor	Copper, Tin plated	Braid, 96%	3.6 mm
Jacket	PVC II (low migration)	RAL 9005 - bk	4.95 mm +/- 0.15 mm

Electrical data	
Impedance	50 Ω +/- 2Ω
Operating frequency	≤ 1 GHz
Capacitance	101 pF/m
Inductance	0.254 μH/m
Velocity of signal propagation	66 %
Signal delay	5.03 ns/m
Screening effectiveness	38 dB at frequency 0.0001 GHz ... 1GHz
Insulation resistance	100000000 MΩ*m
Inner conductor resistance	34.5 Ω/km
Outer conductor resistance	13.8 Ω/km
Operating Voltage (at sea level)	≤ 2.5 kVrms
Test voltage (50 Hz/1 min)	≤ 5 kVrms

Mechanical data	
Weight	approx. 37 g/m
Static bending radius	≥ 25 mm
Repeated bending radius	50 mm

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Environmental data	
Operation temperature	-25 °C ... 85 °C
Installation temperature	-20 °C ... 60 °C
Fire characteristics	contains halogene

Material compliance			
Item number	Directive / Regulation	Rating	Exemptions / Details
22510015	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: M17/183-00001 (former reference: M17/28-RG058)

Suitable connectors
Cable group U7

Ordering information		
Item number	Item description	Available as assembly only
22510015	RG_58_C/U	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 =	0.3455	b coefficient typical =	0.2373
fmax =	1.0	P at 1 GHz =	105.0
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	0.133	0.041	332
0.20	0.202	0.062	235
0.30	0.260	0.079	192
0.40	0.313	0.095	166
0.60	0.410	0.125	136
0.80	0.499	0.152	117
1.00	0.583	0.178	105

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