

RG142, 50 Ohm, 6 GHz, 200°C, Ø4.95 mm, FEP jacket

RG_142_B/U

Properties

- Mil standard RG cable
- Excellent RF performance for precision applications
- Suitable for use in applications up to 6 GHz
- Extended temperature range



Construction			
Component	Material	Detail	Diameter
Centre conductor	Steel, Copper + Silver plated	Wire	0.95 mm
Dielectric	PTFE (Polytetrafluoroethylene)		2.95 mm
Outer conductor	Copper, Silver plated	Braid, 97%	3.6 mm
Outer conductor	Copper, Silver plated	Braid, 94%	4.25 mm
Jacket	FEP (Fluorinated ethylene propylene)	RAL 8015 - br	4.95 mm +/- 0.1 mm

Electrical data	
Impedance	50 Ω +/-2Ω
Operating frequency	≤ 6 GHz
Capacitance	95 pF/m
Velocity of signal propagation	69 %
Signal delay	4.75 ns/m
Screening effectiveness	85 dB at frequency 0.001 GHz ... 6GHz
Insulation resistance	100000000 MΩ*m
Inner conductor resistance	63.2 Ω/km
Operating Voltage (at sea level)	≤ 2.5 kVrms
Test voltage (50 Hz/1 min)	≤ 5 kVrms

Mechanical data	
Weight	approx. 64 g/m
Static bending radius	≥ 30 mm
Repeated bending radius	50 mm

RG142, 50 Ohm, 6 GHz, 200°C, Ø4.95 mm, FEP jacket

RG_142_B/U

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

Additional Information

MIL reference: M17/60-RG142 (former reference: M17/158-00001)

Suitable connectors

Cable group	U9
-------------	----

Ordering information

Item number	Item description	Available as assembly only
22510037	RG_142_B/U	No

Power MatrixCalculation: typical Attenuation [formula: $(a \cdot f^{0.5} + b \cdot f)$] and maximum Power CW [formula: $(p/f^{0.5})$]

a coefficient typical =	0.3956	b coefficient typical =	0.0645
fmax =	6	P at 1 GHz =	407
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	0.190	0.058	910
0.40	0.276	0.084	644
0.60	0.345	0.105	525
0.80	0.405	0.124	455
1.00	0.460	0.140	407
1.20	0.511	0.156	372
1.40	0.558	0.170	344
1.60	0.604	0.184	322
1.80	0.647	0.197	303
2.00	0.688	0.210	288
4.00	1.049	0.320	204
6.00	1.356	0.413	166

HUBER+SUHNER is certified by ISO 9001, ISO 14001, ISO 45001, IATF 16949, AS/EN 9100 and ISO/TS 22163-IRIS. Waiver: Facts and figures herein are for information only and do not represent any warranty of any kind.
DOCUMENT PIM-P978 / Date of publication: 08.08.2024 / uncontrolled copy