

**RG316, 50 Ohm, 3 GHz, 200°C, Ø2.5 mm, FEP jacket**

RG\_316\_/U

**Properties**

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



<b>Construction</b>			
Component	Material	Detail	Diameter
Centre conductor	Steel, Copper + Silver plated	Strand-07	0.54mm
Dielectric	PTFE (Polytetrafluoroethylene)		1.55mm
Outer conductor	Copper, Silver plated	Braid, 95%	2mm
Jacket	FEP (Fluorinated ethylene propylene)	RAL 8015 - br	2.5 mm +/- 0.1 mm

<b>Electrical data</b>	
Impedance	50 Ω +/-2Ω
Operating frequency	≤ 3 GHz
Capacitance	97 pF
Velocity of signal propagation	69 %
Signal delay	4.86 ns/m
Screening effectiveness	38 dB at frequency 0.0001 GHz ... 1GHz
Insulation resistance	100000000 MΩ*m
Inner conductor resistance	235 Ω/km
Operating Voltage (at sea level)	≤ 1.5 kV
Test voltage (50 Hz/1 min)	≤ 3 kV

<b>Mechanical data</b>	
Weight	approx. 16 g/m
Static bending radius	≥ 15 mm
Repeated bending radius	25 mm
Dynamic bending radius	< 37.5 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

**Additional Information**

MIL reference: M17/113-RG316

**Suitable connectors**

Cable group U2

**Ordering information**

Item number	Item description	Available as assembly only
22510079	RG_316_/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 =	<b>0.7727</b>	b coefficient typical =	<b>0.0972</b>
fmax =	<b>3.0</b>	P at 1 GHz =	<b>135.0</b>

Frequency GHz	Nom. attenuation (dB/m)	Nom. attenuation Max. (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	0.365	0.111	302
0.40	0.528	0.161	213
0.60	0.657	0.200	174
0.80	0.769	0.234	151
1.00	0.870	0.265	135
1.20	0.963	0.294	123
1.40	1.050	0.320	114
1.60	1.133	0.345	107
1.80	1.212	0.369	101
2.00	1.287	0.392	95
3.00	1.630	0.497	78

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