CABLE ASSEMBLIES

Flexible cable 10/50 D (RG393)



P/N: ST291 511 007 (MIL-C-17/174-RG393)

APPLICATION NOTE

RG393 is one of the most popular RG cables.

This cable may be used for high frequency range and severe thermal conditions applications.

CONSTRUCTION / DIMENSIONS

	Material	mm	Inches
Center conductor	Stranded SPC[1]	2.39	0.094
Dielectric	Solid PTFE[2]	7.24	0.285
Inner shield	SPC[1] braid	-	-
Outer shield	SPC[1] braid	8.90	0.350
Jacket	Brown FEP[3]	9.91	0.390

ELECTRICAL CHARACTERISTICS

Characteristic impedance	50Ω ± 2Ω	
Operating frequency range	DC - 11 GHz	
Shielding effectiveness	65 dB (DC - 3 GHz)	
Voltage withstanding	10 000 V rms	
Peak power	8.3 kW	
Capacitance	96 pF / m	29 pF / ft
Velocity of propagation	70 % (4.8 ns / m)	

MECHANICAL CHARACTERISTICS

Recommended minimum bending radius	40 mm	1.57 inch
Weight	235 g / m	0.1567 lbs / ft

ENVIRONMENTAL CHARACTERISTICS

Operating temperature range	-55 / +200 °C	-67 / +392 °F
Fire resistance	Yes (CSA FT6 / IEC 332-2)	
Halogen free	No	

FREQUENCY / ATTENUATION (typ.) / CW MAX POWER (sea level / 25 °C)

GHz	dB / m	dB / ft	Watts
0.5	0.15	0.05	1 273
1.0	0.23	0.07	900
1.5	0.29	0.09	735
2.0	0.35	0.11	636
3.0	0.45	0.14	520
6.0	0.71	0.21	367
8.0	0.86	0.26	318
10.0	1.00	0.30	285
11.0	1.07	0.32	271
Attenuation calculation (dB/m)	(0.19 x √f GHz) + (0.04 x f GHz)		
Power calculation (W)	900 / √f GHz		

[1] SPC = Silver Plated Copper
[2] PTFE = PolyTetraFluoroEthylene
[3] FEP = Fluorinated Ethylene Propylene

Flexible cable 11/50 D (RG214 - KX13)



P/N: ST291 600 000 (MIL-C-17/75-RG214)

P/N: C291 600 010 (NF-C-93/550-KX13)

APPLICATION NOTE

RG214 is one of the most popular RG cables.

To reduce cost when thermal conditions allow this cable may be used instead of RG393.

CONSTRUCTION / DIMENSIONS

	Material	mm	Inches
Center conductor	Standed SPC[1]	2.25	0.089
Dielectric	Solid PE[2]	7.24	0.285
Inner shield	SPC[1] braid	-	-
Outer shield	SPC[1] braid	8.89	0.350
Jacket	Black PVC[3]	10.80	0.425

ELECTRICAL CHARACTERISTICS

Characteristic impedance	50Ω ± 2Ω	
Operating frequency range	DC - 11 GHz	
Shielding effectiveness	65 dB (DC - 3 GHz)	
Voltage withstanding	10 000 V rms	
Peak power	6.5 kW	
Capacitance	96 pF / m	29 pF / ft
Velocity of propagation	66 % (5 ns / m)	

MECHANICAL CHARACTERISTICS

Recommended minimum bending radius	40 mm	1.57 inch
Weight	174 g / m	0.1170 lbs / ft

ENVIRONMENTAL CHARACTERISTICS

Operating temperature range	-40 / +85 °C	-40 / +185 °F
Fire resistance	No	
Halogen free	No	

FREQUENCY / ATTENUATION (typ.) / CW MAX POWER (sea level / 25 °C)

GHz	dB / m	dB / ft	Watts
0.5	0.16	0.05	255
1.0	0.24	0.07	180
1.5	0.30	0.09	147
2.0	0.36	0.11	127
3.0	0.47	0.14	104
6.0	0.73	0.22	73
8.0	0.89	0.27	64
10.0	1.03	0.31	57
11.0	1.10	0.33	54
Attenuation calculation (dB/m)	(0.20 x √f GHz) + (0.04 x F GHz)		
Power calculation (W)	180 / √f GHz		

[1] SPC = Silver Plated Copper
[2] PE = PolyEthylene
[3] PVC = PolyVinyl Chloride

Note:
Typical attenuation for a couple of connectors (dB) = 0.045 x √f (GHz)