CABLE ASSEMBLIES

Flexible cable 5/50 S (RG58 - KX15)



P/N: C291 305 000 (MIL-C-17/28-RG58)

P/N: C291 305 010 (NF-C-93/550-KX15)

APPLICATION NOTE

RG58 is one of the most popular RG cables.
Due to its construction and raw material construction, RG58 / KX15 is designed to perform the same as 5/50 cables (RG142, RG223, ECO142)
This very flexible cable can be considered for applications requiring low electrical performance and reduced cost.

CONSTRUCTION / DIMENSIONS

	Material	mm	Inches
Center conductor	Stranded TC[1]	0.90	0.035
Dielectric	Solid PE[2]	2.95	0.116
Inner shield	TC[1] braid	3.66	0.144
Outer shield	-	-	-
Jacket	Black PVC[3]	4.95	0.195

ELECTRICAL CHARACTERISTICS

Characteristic impedance	50Ω ± 2Ω	
Operating frequency range	DC - 1 GHz	
Shielding effectiveness	40 dB	
Voltage withstanding	5 000 V rms	
Peak power	2.6 kW	
Capacitance	96 pF / m	29 pF / ft
Velocity of propagation	66 % (5 ns / m)	

MECHANICAL CHARACTERISTICS

Recommended minimum bending radius	20 mm	0.787 inch
Weight	35 g / m	0.0234 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
0.05	0.14	0.04	246
0.1	0.20	0.06	174
0.2	0.29	0.09	123
0.3	0.36	0.11	100
0.5	0.47	0.14	78
0.6	0.51	0.16	71
0.7	0.56	0.17	66
0.8	0.60	0.18	61
1.0	0.67	0.20	55
Attenuation calculation (dB/m)	(0.63 x √f GHz) + (0.04 x f GHz)		
Power calculation (W)	55 / √f GHz		

[1] TC = Tinned Copper
[2] PE = PolyEthylene
[3] PVC = PolyVinyl Chloride

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

Flexible cable 5/50 D (RG142)



P/N: C291 320 007 (MIL-C-17/158-RG142)

APPLICATION NOTE

RG142 is one of the most popular RG cables.
This cable offers a compromise between flexibility and electrical performances.
RG142 will be selected among other 5/50 RG's for applications requiring high frequency range and low attenuation.
Suitable for severe thermal conditions.

CONSTRUCTION / DIMENSIONS

	Material	mm	Inches
Center conductor	Solid SPCCS[1]	0.94	0.037
Dielectric	Solid PTFE[2]	2.95	0.116
Inner shield	SPC[3] braid	-	-
Outer shield	SPC[3] braid	4.19	0.165
Jacket	Brown FEP[4]	4.95	0.195

ELECTRICAL CHARACTERISTICS

Characteristic impedance	50Ω ± 2Ω	
Operating frequency range	DC - 12.4 GHz	
Shielding effectiveness	65 dB (DC - 3GHz)	
Voltage withstanding	5 000 V rms	
Peak power	3.4 kW	
Capacitance	97 pF / m	29.3 pF / ft
Velocity of propagation	70 % (4.8 ns / m)	

MECHANICAL CHARACTERISTICS

Recommended minimum bending radius	25 mm	0.984 inch
Weight	64 g / m	0.043 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	0.30	0.09	665
1.0	0.44	0.13	470
1.5	0.55	0.17	384
2.0	0.65	0.20	332
3.0	0.81	0.25	271
6.0	1.22	0.37	192
8.0	1.45	0.44	166
10.0	1.66	0.50	149
12.4	1.90	0.58	133
Attenuation calculation (dB/m)	(0.40 x √f GHz) + (0.04 x f GHz)		
Power calculation (W)	470 / √f GHz		

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