CABLE ASSEMBLIES

Flexible cable 5/50 D (KX23)



P/N: ST291 322 017 (NF-C-93/550-KX23)

APPLICATION NOTE

Relevant standard: NF-C-93/550-KX23 (France)

Due to its stranded inner conductor it is much more flexible than RG142 or RG223.

This cable can be used instead of equivalent RG's for specific applications requiring high flexibility.

Suitable for severe thermal conditions.

CONSTRUCTION / DIMENSIONS

	Material	mm	Inches
Center conductor	Stranded SPC[1]	0.92	0.036
Dielectric	Solid PTFE[2]	2.95	0.116
Inner shield	SPC braid	-	-
Outer shield	SPC braid	4.34	0.171
Jacket	Translucent fiber glass	5.10	0.201

ELECTRICAL CHARACTERISTICS

Characteristic impedance	50Ω ± 2.5Ω	
Operating frequency range	DC - 8 GHz	
Shielding effectiveness	65 dB (DC - 3 GHz)	
Voltage withstanding	5 000 V rms	
Peak power	3 kW	
Capacitance	95 pF / m	28.8 pF / ft
Velocity of propagation	70 % (4.8 ns / m)	

MECHANICAL CHARACTERISTICS

Recommended minimum bending radius	30 mm	1.181 inch
Weight	70 g / m	0.0466 lbs / ft

ENVIRONMENTAL CHARACTERISTICS

Operating temperature range	-55 / +200 °C	-67 / +392 °F
Fire resistance	Yes (IEC 60332-1)	
Halogen free	No	

FREQUENCY / ATTENUATION (typ. / 25 °C) / CW MAX POWER (sea level / 40 °C)

GHz	dB / m	dB / ft	Watts
0.5	0.33	0.10	375
1.0	0.48	0.14	260
1.5	0.60	0.18	210
2.0	0.70	0.21	180
2.5	0.80	0.24	160
3.0	0.89	0.27	146
4.0	1.05	0.32	126
5.0	1.20	0.37	112
6.0	1.35	0.41	102
8.0	1.61	0.49	88
Attenuation calculation (dB/m)	(0.427 x √f GHz) + (0.05 x f GHz)		

[1] SPC = Silver Plated Copper
[2] PTFE = PolyTetraFluoroEthylene

Flexible cable 6/75 S (RG59)



P/N: ST291 360 000 (MIL-C-17/29-RG59)

APPLICATION NOTE

Due to its 75 ohms characteristic impedance, RG59 is best suited for TV/ Video application.

Its solid inner conductor allows better attenuation than the equivalent KX solution (KX6).

CONSTRUCTION / DIMENSIONS

	Material	mm	Inches
Center conductor	Solid CCS[1]	0.57	0.022
Dielectric	Solid PE[2]	3.71	0.146
Inner shield	Copper braid	4.50	0.177
Outer shield	-	-	-
Jacket	Black PVC[3]	6.15	0.242

ELECTRICAL CHARACTERISTICS

Characteristic impedance	75Ω ± 3Ω	
Operating frequency range	DC - 1 GHz	
Shielding effectiveness	40 dB	
Voltage withstanding	7 000 V rms	
Peak power	2.7 kW	
Capacitance	60 pF / m	18.2 pF / ft
Velocity of propagation	66 % (5 ns / m)	

MECHANICAL CHARACTERISTICS

Recommended minimum bending radius	30 mm	1.18 inch
Weight	47 g / m	0.0315 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	0.09	0.03	335
0.1	0.13	0.04	237
0.2	0.19	0.06	168
0.3	0.23	0.07	137
0.5	0.30	0.09	106
0.6	0.33	0.10	97
0.7	0.36	0.11	90
0.8	0.39	0.12	84
1.0	0.44	0.13	75
Attenuation calculation (dB/m)	(0.40 x √f GHz) + (0.04 x f GHz)		
Power calculation (W)	75 / √f GHz		

[1] CCS = Copper Covered Steel
[2] PE = PolyEthylene
[3] PVC = PolyVinyl Chloride

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