CABLE ASSEMBLIES

Flexible cable 2/75 S (296775 type)



P/N: ST291147060

APPLICATION NOTE

Due to its 75 ohms characteristic impedance, this cable is is best suited for TV/Video and networks applications.
Its small diameter and light weight make it perfect to be used in all miniature, space saving and dymamic applications.

CONSTRUCTION / DIMENSIONS

	Material	mm	Inches
Center conductor	Solid SPCCS[1]	0.17	0.007
Dielectric	Solid PE[2]	1.00	0.039
Inner shield	SPC[3] braid	1.32	0.052
Outer shield	-	-	-
Jacket	Black LSZH PE[4]	1.90	0.075

ELECTRICAL CHARACTERISTICS

Characteristic impedance	75Ω ± 5Ω	
Operating frequency range	DC - 3 GHz	
Shielding effectiveness	50 dB min	
Voltage withstanding	8 000 V rms	
Peak power	400 W	
Capacitance	67 pF / m	20.1 pF / ft
Velocity of propagation	66 % (5 ns / m)	

MECHANICAL CHARACTERISTICS

Recommended minimum bending radius	10 mm	0.394 inch
Weight	6.6 g / m	0.0044 lbs / ft

ENVIRONMENTAL CHARACTERISTICS

Operating temperature range	-60 / +85 °C	-40 / +185 °F
Fire resistance	No	
Halogen free	Yes (IEC 754-2)	

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

GHz	dB / m	dB / ft	Watts
0.1	0.42	0.13	41
0.2	0.60	0.18	29
0.3	0.74	0.22	23
0.4	0.86	0.26	20
0.6	1.06	0.32	16
1.0	1.38	0.42	12
1.5	1.70	0.52	10
2.0	1.98	0.60	8
2.5	2.23	0.68	7
3.0	2.46	0.75	6
Attenuation calculation (dB/m)	(1.317 x √f GHz) + (0.06 x f GHz)		

[1] SPCCS = Silver Plated Copper covered steel
[2] PE = PolyEthylene
[3] SPC = Silver Plated Copper
[4] LSZH PE = Low Smoke Zero Halogen PolyEthylene

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

Flexible cable 2.6/50 S (RG174 - KX3B)



Cost effective solution

P/N: ST291150000 (MIL-C-17/119-RG174)

P/N: ST291150010 (NF-C-93/550-KX3B)

APPLICATION NOTE

For cost savings in low frequency applications, RG174 may be used instead of RG316 when environmental conditions like operating temperature allow it.
This cable is compatible with a large range of connector series.

CONSTRUCTION / DIMENSIONS

	Material	mm	Inches
Center conductor	Stranded CCS[1]	0.48	0.019
Dielectric	Solid PE[2]	1.52	0.060
Inner shield	TC[3] braid	2.21	0.087
Outer shield	-	-	-
Jacket	Black PVC[4]	2.79	0.110

ELECTRICAL CHARACTERISTICS

Characteristic impedance	50Ω ± 2Ω	
Operating frequency range	DC - 1 GHz	
Shielding effectiveness	40 dB	
Voltage withstanding	2 000 V rms	
Peak power	1.4 kW	
Capacitance	97.5 pF / m	29.5 pF / ft
Velocity of propagation	66 % (5 ns / m)	

MECHANICAL CHARACTERISTICS

Recommended minimum bending radius	10 mm	0.394 inch
Weight	13 g / m	0.0088 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	0.23	0.07	72
0.1	0.33	0.10	51
0.2	0.47	0.14	36
0.3	0.58	0.17	29
0.5	0.75	0.23	23
0.6	0.82	0.25	21
0.7	0.89	0.27	19
0.8	0.95	0.29	18
1.0	1.07	0.32	16
Attenuation calculation (dB/m)	(1.03 x √f GHz) + (0.04 x f GHz)		
Power calculation (W)	16 / √f GHz		

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