CABLE ASSEMBLIES

Flexible cable 11/75 D (RG216)



P/N: ST291 610 000 (MIL-C-17/77-RG216)

APPLICATION NOTE

Due to its 75 ohms characteristic impedance, RG 216 is better suited for TV/Video applications.

CONSTRUCTION / DIMENSIONS

	Material	mm	Inches
Center conductor	Stranded TC[1]	1.21	0.048
Dielectric	Solid PE[2]	7.24	0.285
Inner shield	Copper braid	-	-
Outer shield	Copper braid	8.89	0.350
Jacket	Black PVC[3]	10.80	0.425

ELECTRICAL CHARACTERISTICS

Characteristic impedance	75Ω ± 3Ω	
Operating frequency range	DC - 3 GHz	
Shielding effectiveness	65 dB	
Voltage withstanding	10 000 V rms	
Peak power	5.3 kW	
Capacitance	66 pF / m	20 pF / ft
Velocity of propagation	66 % (5 ns / m)	

MECHANICAL CHARACTERISTICS

Recommended minimum bending radius	50 mm	1.97 inch
Weight	165 g / m	0.1104 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
0.1	0.09	0.03	395
0.2	0.13	0.04	280
0.3	0.17	0.05	228
0.5	0.22	0.07	177
1.0	0.32	0.10	125
1.5	0.40	0.12	102
2.0	0.48	0.14	88
2.5	0.54	0.16	79
3.0	0.60	0.18	72
Attenuation calculation (dB/m)	(0.28 x √f GHz) + (0.04 x f GHz)		
Power calculation (W)	125 / √f GHz		

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

Flexible cable 2.6/50 S (ECO316: alternative to RG316)



ECO-Friendly cable
Cost effective solution

P/N: ST291 999 904

APPLICATION NOTE

Designed by SYNERGY, ECO316 is an advantageous alternative solution to RG316:

- **Advantageous in term of electrical performance:** its optimized construction allows better attenuation and screening effectiveness than RG316 and RG 174.
- **Environmental advantages:** halogen and sulphur free, this cable does not emit any toxic substance when submitted to fire. The flame retardant jacket allows ECO316 to meet fire resistance standards.
- **Advantageous in term of price:** ECO316 design has integrated all Synergy knowledge to reach the best performance with a very competitive price.

ECO316 is UL style 1375 approved.

This cable is compatible with a large range of connector series.

CONSTRUCTION / DIMENSIONS

	Material	mm	Inches
Center conductor	Solid OFC[1]	0.55	0.022
Dielectric	Foam PE[2]	1.55	0.061
Inner shield	OFC[1] braid	1.90	0.075
Outer shield	-	-	-
Jacket	Black LSZH PE[3]	2.45	0.096

ELECTRICAL CHARACTERISTICS

Characteristic impedance	50Ω ± 2Ω	
Operating frequency range	DC - 3 GHz	
Shielding effectiveness	50 dB	
Voltage withstanding	2 000 V rms	
Peak power	1.4 kW	
Capacitance	84 pF / m	25.5 pF / ft
Velocity of propagation	80 % (4.15 ns / m)	

MECHANICAL CHARACTERISTICS

Recommended minimum bending radius	15 mm	0.590 inch
Weight	10 g / m	0.0066 lbs / ft

ENVIRONMENTAL CHARACTERISTICS

Operating temperature range	-40 / +85 °C	-40 / +185 °F
Fire resistance	Yes (UL1581 VW1 / IEC 332-1)	
Halogen free	Yes (IEC 754-2)	

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

GHz	dB / m	dB / ft	Watts
0.1	0.24	0.07	120
0.2	0.33	0.10	85
0.3	0.41	0.12	69
0.5	0.53	0.16	54
1.0	0.76	0.23	38
1.5	0.94	0.28	31
2.0	1.09	0.33	27
2.5	1.22	0.37	24
3.0	1.34	0.41	22
Attenuation calculation (dB/m)	(0.74 x √f GHz) + (0.02 x f GHz)		
Power calculation (W)	38 / √f GHz		

[1] OFC = Oxygen Free Copper
[2] PE = PolyEthylene
[3] LSZH PE = Low Smoke Zero Halogen PolyEthylene

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