CABLE ASSEMBLIES

Semi-rigid cable .085 (Tinned copper)



P/N: ST291 850 005 (MIL-C-17/133-00007)

APPLICATION NOTE

Due to the outer conductor coating (tin), this cable can be used instead of RG405 for applications requiring high corrosion resistance and improved solderability.

CONSTRUCTION / DIMENSIONS

	Material	mm	Inches
Center conductor	Solid SPCCS[1]	0.51	0.020
Dielectric	Solid PTFE[2]	1.68	0.066
Inner shield	TPC[3]	2.20	0.087
Outer shield	-	-	-
Jacket	-	-	-

ELECTRICAL CHARACTERISTICS

Characteristic impedance	50Ω ± 1.5Ω	
Operating frequency range	DC - 20 GHz	
Shielding effectiveness	110 dB	
Voltage withstanding	5 000 V DC	
Peak power	1.9 kW	
Capacitance	100 pF / m	30 pF / ft
Velocity of propagation	70 % (4.8 ns / m)	

MECHANICAL CHARACTERISTICS

Recommended minimum bending radius	3.17 mm	0.125 inch
Weight	20.0 g / m	0.0135 lbs / ft

ENVIRONMENTAL CHARACTERISTICS

Operating temperature range	-40 / +125 °C	-40 / +257 °F
Fire resistance	N/A	
Halogen free	No	

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

GHz	dB / m	dB / ft	Watts
1.0	0.65	0.20	100
2.0	0.94	0.29	71
3.0	1.18	0.36	58
6.0	1.73	0.53	41
8.0	2.05	0.62	35
10.0	2.33	0.71	32
12.4	2.64	0.80	28
18.0	3.31	1.00	24
20.0	3.53	1.07	22
Attenuation calculation (dB/m)	(0.61 x √f GHz) + (0.04 x f GHz)		
Power calculation (W)	100 / √f GHz		

[1] SPCCS = Silver Plated Copper Covered Steel
[2] PTFE = PolyTetraFluoroEthylene
[3] TPC = Tin Plated Copper

Semi-rigid cable .085 (Non magnetic)



P/N: ST291 851 001 (MIL-C-17/133-00008)

APPLICATION NOTE

Based on RG405 standard, this cable is used where non magnetic is required.

CONSTRUCTION / DIMENSIONS

	Material	mm	Inches
Center conductor	Solid SPC[1]	0.51	0.020
Dielectric	Solid PTFE[2]	1.68	0.066
Inner shield	Copper tubing	2.20	0.087
Outer shield	-	-	-
Jacket	-	-	-

ELECTRICAL CHARACTERISTICS

Characteristic impedance	50Ω ± 1.5Ω	
Operating frequency range	DC - 20 GHz	
Shielding effectiveness	110 dB	
Voltage withstanding	5 000 V rms	
Peak power	1.9 kW	
Capacitance	100 pF / m	30 pF / ft
Velocity of propagation	70 % (4.8 ns / m)	

MECHANICAL CHARACTERISTICS

Recommended minimum bending radius	3.17 mm	0.125 inch
Weight	20.0 g / m	0.0135 lbs / ft

ENVIRONMENTAL CHARACTERISTICS

Operating temperature range	-40 / +125 °C	-40 / +257 °F
Fire resistance	N/A	
Halogen free	No	

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

GHz	dB / m	dB / ft	Watts
1.0	0.65	0.20	100
2.0	0.94	0.29	71
3.0	1.18	0.36	58
6.0	1.73	0.53	41
8.0	2.05	0.62	35
10.0	2.33	0.71	32
12.4	2.64	0.80	28
18.0	3.31	1.00	24
20.0	3.53	1.07	22
Attenuation calculation (dB/m)	(0.61 x √f GHz) + (0.04 x f GHz)		
Power calculation (W)	100 / √f GHz		

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

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