CABLE ASSEMBLIES

Flexible cable 0.8/50 S (132390 type)



P/N: C291042066

APPLICATION NOTE

The very small outer diameter and bending moment of this cable allow very easy routing during installation.

Its very light weight makes it perfect to be used in all miniature and space saving applications.

The insulation and jacket materials allow this cable to be used in severe thermal conditions.

CONSTRUCTION / DIMENSIONS

	Material	mm	Inches
Center conductor	Solid SPC[1]	0.16	0.006
Dielectric	Solid PFA[2]	0.50	0.020
Inner shield	SPC[1] braid	0.70	0.028
Outer shield	-	-	-
Jacket	White FEP[3]	0.83 max	0.033 max

ELECTRICAL CHARACTERISTICS

Characteristic impedance	50Ω ± 3Ω	
Operating frequency range	DC - 3 GHz	
Shielding effectiveness	40 dB	
Voltage withstanding	18 000 V rms	
Peak power	6 kW	
Capacitance	98.7 pF / m	29.9 pF / ft
Velocity of propagation	69 % (4.8 ns / m)	

MECHANICAL CHARACTERISTICS

Recommended minimum bending radius	4 mm	0.157 inch
Weight	1.8 g / m	0.001 lbs / ft

ENVIRONMENTAL CHARACTERISTICS

Operating temperature range	-50 / +200 °C	-58 / +392 °F
Fire resistance	Yes (UL94V0)	
Halogen free	No	

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

GHz	dB / m	dB / ft	Watts
0.1	0.64	0.19	45
0.2	0.88	0.27	34
0.3	1.90	0.58	28
0.4	1.28	0.39	22
0.5	1.48	0.45	20
1.0	2.41	0.73	14
1.5	3.03	0.92	12
2.0	3.51	1.06	10
2.5	4.20	1.27	9
3.0	4.93	1.49	8

[1] SPC = Silver Plated Copper
[2] PFA = PerFluoroAlkoxy
[3] FEP = Fluorinated Ethylene Propylene

Flexible cable 1/50 S (50 vmtx type)



P/N: C291050066

APPLICATION NOTE

The very small outer diameter and bending moment of this cable allow very easy routing during installation.

Its very light weight makes it perfect to be used in all miniature and space saving applications.

The insulation and jacket materials allow this cable to be used in severe thermal conditions.

CONSTRUCTION / DIMENSIONS

	Material	mm	Inches
Center conductor	Solid SPC[1]	0.17	0.007
Dielectric	Solid PTFE[2]	0.52	0.020
Inner shield	SPC[1] braid	0.70	0.028
Outer shield	-	-	-
Jacket	White FEP[3]	1.17	0.046

ELECTRICAL CHARACTERISTICS

Characteristic impedance	50Ω ± 5Ω	
Operating frequency range	DC - 3 GHz	
Shielding effectiveness	40 dB	
Voltage withstanding	19 000 V rms	
Peak power	7 kW	
Capacitance	94 pF / m	28.5 pF / ft
Velocity of propagation	69 % (4.8 ns / m)	

MECHANICAL CHARACTERISTICS

Recommended minimum bending radius	6 mm	0.236 inch
Weight	3 g / m	0.002 lbs / ft

ENVIRONMENTAL CHARACTERISTICS

Operating temperature range	-90 / +200 °C	-130 / +392 °F
Fire resistance	Yes (UL94V0)	
Halogen free	No	

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

GHz	dB / m	dB / ft	Watts
0.1	0.54	0.16	82
0.2	0.80	0.24	58
0.3	1.01	0.31	45
0.4	1.20	0.36	39
0.5	1.37	0.42	34
1.0	2.12	0.64	25
1.5	2.76	0.84	21
2.0	3.36	1.02	17
2.5	3.91	1.19	15
3.0	4.45	1.35	14
Attenuation calculation (dB/m)	(1.51 x √f GHz) + (0.61 x f GHz)		

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

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