CABLE ASSEMBLIES

Low loss flexible cable 2.6/50 S+F
(AEP-100FR alternative to LMR-100FR®)



P/N: C291 327 060

APPLICATION NOTE

AEP-100FR cable is an alternative solution to 50 Ohms LMR-100FR® cable offering the same performance and similar construction with cost advantage.

REGULATIONS

RoHS compliant
UL/NEC: CMR
UL/CSA: FT4

CONNECTORS COMPATIBLE WITH AEP-100FR (and to LMR® 100FR)

QMA Series

P/N	Interface	Model
R123 071 000	Straight plug	Crimp type

SMA Series

P/N	Interface	Model
R124 071 123	Straight plug	Crimp type
R124 172 123	R/A plug	Crimp type
R124 312 123	Straight BH jack	Crimp type

TNC Series

P/N	Interface	Model
R143 075 000	Straight plug	Crimp type

N Series

P/N	Interface	Model
R161 072 000	Straight plug	Crimp type

(1) BC = Bare Copper
(2) PE = PolyEthylene

CONSTRUCTION / DIMENSIONS

	Material	mm	Inches
Center conductor	Solid BC (1)	0.46	0.018
Dielectric	Solid PE(2)	1.52	0.06
Inner shield	Al Tape Unbonded	1.65	0.065
Outer shield	Tinned Copper braid	2.11	0.083
Outer jacket	Black LSZH	2.79	0.11

ELECTRICAL CHARACTERISTICS

Characteristic impedance	50 ohms	
Operating frequency range	DC - 6 GHz	
Dielectric constant	2.3	
Screening effectiveness	> 90 dB	
Velocity of propagation	66 %	
Capacitance	101.1 pF / m	30.8 pF / ft
Inductance	0.25 uH / m	0.077 uH / ft
Time delay	5.05 nS / m	1.54 nS / ft
Inner conductor DC resistance	266 ohms / km	81.0 ohms / 1000 ft
Outer conductor DC resistance	31.2 ohms / km	9.5 ohms / 1000 ft
Voltage withstand	500 Volts DC	
Jacket spark	2000 Volts RMS	
Peak power	0.6kW	
Phase stability over temp	< 25 ppm / deg C	

MECHANICAL CHARACTERISTICS

Maximum weight	14 g / m	0.092 lb / ft
Min. bend radius: installation	6.4 mm	0.25 inch
Min. bend radius: repeated	25.4 mm	1.0 inch
Bending moment	0.014 N-m	0.1 ft-lb
Tensile strength	6.8 kg	15 lb
Flat plate crush	0.18 kg / mm	10 lb / inch

ENVIRONMENTAL CHARACTERISTICS

Installation temperature range	-40 / +85 °C	-40 / +185 °F
Storage temperature range	-70 / +85 °C	-94 / +185 °F
Operating temperature range	-40 / +85 °C	-40 / +185 °F

FREQUENCY / ATTENUATION (typ.) / AVG POWER (*)

MHz	DB / 100 m	DB / 100 ft	kW
30	12.9	3.9	0.230
50	16.7	5.1	0.180
150	29.4	8.9	0.100
220	35.8	10.9	0.083
450	51.9	15.8	0.057
900	74.9	22.8	0.039
1500	98.7	30.1	0.029
1800	109.0	33.2	0.027
2000	115.5	35.2	0.025
2500	130.6	39.8	0.022
5800	210.3	64.1	0.013

(*) = Avg power calculated at sea level / 40°C and VSWR 1:0
(Cable-assembly power ratings may be limited by the connector type. Please contact us for specific needs)