CABLE ASSEMBLIES

Flexible low loss cable 15/50 S+F
(AEP-600FR alternative to LMR-600FR®)



P/N: C291 327 050

APPLICATION NOTE

AEP-600FR cable is an alternative solution to 50 Ohms LMR-600FR® cable offering the same performance and similar construction with cost advantage.

REGULATIONS

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

CONNECTORS COMPATIBLE WITH AEP-600FR (and to LMR® 600FR)

N Series

P/N	Interface	Model
R161 079 200	Straight plug	Crimp type
R161 188 200	R/A plug	Crimp type
R161 331 400	Straight BH jack	Crimp type

QN Series

P/N	Interface	Model
R164 080 030	Straight plug	Crimp type

7/16 Series

P/N	Interface	Model
R185 077 010	Straight plug	Crimp type

(1) BCCAl = Copper Clad Aluminum
(2) PE = PolyEthylene

CONSTRUCTION / DIMENSIONS

	Material	mm	Inches
Center conductor	Solid BCCAl (1)	4.47	0.176
Dielectric	Foam PE(2)	11.56	0.455
Inner shield	Aluminum Tape	11.71	0.461
Outer shield	Tinned Copper braid	12.45	0.49
Outer jacket	Black LSZH	14.99	0.59

ELECTRICAL CHARACTERISTICS

Characteristic impedance	50 ohms	
Operating frequency range	DC - 6 GHz	
Dielectric constant	1.32	
Screening effectiveness	> 90 dB	
Velocity of propagation	87 %	
Capacitance	76.6 pF / m	23.4 pF / ft
Inductance	0.19 uH / m	0.058 uH / ft
Time delay	3.83 nS / m	1.17 nS / ft
Inner conductor DC resistance	1.7 ohms / km	0.53 ohms / 1000 ft
Outer conductor DC resistance	3.9 ohms / km	1.2 ohms / 1000 ft
Voltage withstand	4000 Volts DC	
Jacket spark	8000 Volts RMS	
Peak power	40kW	
Phase stability over temp	< 25 ppm / deg C	

MECHANICAL CHARACTERISTICS

Maximum weight	0.20 kg / m	0.131 lb / ft
Min. bend radius: installation	38.1 mm	1.50 inch
Min. bend radius: repeated	152.4 mm	6.0 inch
Bending moment	3.73 N-m	2.75 ft-lb
Tensile strength	158.9 kg	350 lb
Flat plate crush	1.07 kg / mm	60 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	1.4	0.4	5.51
50	1.8	0.5	4.24
150	3.2	1.0	2.41
220	3.9	1.2	1.97
450	5.6	1.7	1.35
900	8.2	2.5	0.93
1500	10.9	3.3	0.70
1800	12.1	3.7	0.63
2000	12.8	3.9	0.59
2500	14.5	4.4	0.52
5800	23.8	7.3	0.32

(*) = 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)