CABLE ASSEMBLIES

Flexible low loss cable 5/50 S+F
(AEP-195FR alternative to LMR-195FR®)



P/N: ST291 327 010

APPLICATION NOTE

AEP-195FR cable is an alternative solution to 50 Ohms LMR-195FR® cable offering the same performance and similar construction with cost advantage.

REGULATIONS

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

CONNECTORS COMPATIBLE WITH AEP-195FR (and to LMR® 195FR)

QMA Series

P/N	Interface	Model
R123 075 200	Straight plug	Crimp type

SMA Series

P/N	Interface	Model
R124 075 210	Straight plug	Crimp type
R124 175 110	R/A plug	Crimp type

TNC Series

P/N	Interface	Model
R143 082 027	Straight plug	Crimp type

N Series

P/N	Interface	Model
R161 082 120	Straight plug	Crimp type

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

CONSTRUCTION / DIMENSIONS

	Material	mm	Inches
Center conductor	Solid BC (1)	0.94	0.037
Dielectric	Foam PE(2)	2.79	0.11
Inner shield	Aluminum Tape	2.95	0.116
Outer shield	Tinned Copper braid	3.53	0.139
Outer jacket	Black LSZH	4.95	0.195

ELECTRICAL CHARACTERISTICS

Characteristic impedance	50 ohms	
Operating frequency range	DC - 6 GHz	
Dielectric constant	1.56	
Screening effectiveness	> 90 dB	
Velocity of propagation	76 %	
Capacitance	83.3 pF / m	25.4 pF / ft
Inductance	0.21 uH / m	0.064 uH / ft
Time delay	4.17 nS / m	1.27 nS / ft
Inner conductor DC resistance	24.9 ohms / km	7.6 ohms / 1000 ft
Outer conductor DC resistance	16.1 ohms / km	4.9 ohms / 1000 ft
Voltage withstand	1000 Volts DC	
Jacket spark	3000 Volts RMS	
Peak power	2.5kW	
Phase stability over temp	< 25 ppm / deg C	

MECHANICAL CHARACTERISTICS

Maximum weight	30 g / m	0.021 lb / ft
Min. bend radius: installation	12.7 mm	0.5 inch
Min. bend radius: repeated	50.8 mm	2.0 inch
Bending moment	0.27 N-m	0.2 ft-lb
Tensile strength	18.2 kg	40 lb
Flat plate crush	0.27 kg / mm	15 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	6.5	2.0	0.89
50	8.4	2.5	0.68
150	14.6	4.4	0.39
220	17.7	5.4	0.32
450	25.5	7.8	0.22
900	36.5	11.1	0.16
1500	47.7	14.5	0.12
1800	52.5	16.0	0.11
2000	55.4	16.9	0.10
2500	62.4	19.0	0.09
5800	98.1	29.9	0.06

(*) = 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)