

Product Specifications



LDF4.5-50

LDF4.5-50, HELIAX® Low Density Foam Coaxial Cable, corrugated copper, 5/8 in, black PE jacket



CHARACTERISTICS

Construction Materials

Jacket Material	PE
Dielectric Material	Foam PE
Flexibility	Standard
Inner Conductor Material	Copper-clad aluminum wire
Jacket Color	Black
Outer Conductor Material	Corrugated copper

Dimensions

Nominal Size	5/8 in
Cable Weight	0.27 lb/ft
Diameter Over Dielectric	0.710 in 18.034 mm
Diameter Over Jacket	0.870 in 22.098 mm
Inner Conductor OD	0.280 in 7.112 mm
Outer Conductor OD	0.780 in 19.812 mm

Electrical Specifications

Cable Impedance	50 ohm \pm 1 ohm
Capacitance	23 pF/ft 7612 pF/m
dc Resistance, Inner Conductor	0.220 ohms/kft
dc Resistance, Outer Conductor	0.420 ohms/kft
dc Test Voltage	5000 V
Inductance	0.057 μ H/ft 0.187 μ H/m
Insulation Resistance	100000 MOhm
Jacket Spark Test Voltage (rms)	8000 V
Operating Frequency Band	1 – 6100 MHz
Peak Power	62.0 kW
Pulse Reflection	0.5%
Velocity	88%

Environmental Specifications

Installation Temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Operating Temperature	-55 °C to +85 °C (-67 °F to +185 °F)
Storage Temperature	-70 °C to +85 °C (-94 °F to +185 °F)

Mechanical Specifications

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Bending Moment	9.2 ft lb 12.5 N-m
Flat Plate Crush Strength	70.0 lb/in
Minimum Bend Radius, Multiple Bends	8.00 in 203.20 mm
Minimum Bend Radius, Single Bend	3.00 in 76.20 mm
Number of Bends, minimum	15
Number of Bends, typical	40
Tensile Strength	800 lb 363 kg

Standard Conditions

Attenuation, Ambient Temperature	68 °F 20 °C
Average Power, Ambient Temperature	104 °F 40 °C
Average Power, Inner Conductor Temperature	212 °F 100 °C

Attenuation

Frequency (MHz)	Attenuation (dB/100 ft)	Attenuation (dB/100 m)	Average Power (kW)
0.5	0.032	0.105	62.00
1	0.045	0.149	53.90
1.5	0.056	0.183	43.97
2	0.064	0.211	38.04
10	0.145	0.476	16.88
20	0.207	0.678	11.86
30	0.254	0.834	9.64
50	0.33	1.084	7.41
88	0.443	1.453	5.53
100	0.473	1.553	5.17
108	0.493	1.617	4.97
150	0.586	1.921	4.18
174	0.633	2.078	3.87
200	0.682	2.237	3.59
300	0.847	2.778	2.89
400	0.989	3.244	2.48
450	1.054	3.459	2.32
500	1.117	3.664	2.19
512	1.131	3.712	2.17
600	1.234	4.049	1.99
700	1.344	4.41	1.82
800	1.448	4.75	1.69
824	1.472	4.829	1.66
894	1.54	5.054	1.59
960	1.603	5.261	1.53
1000	1.641	5.383	1.49
1250	1.862	6.109	1.32
1500	2.067	6.783	1.19
1700	2.222	7.292	1.10
1800	2.297	7.538	1.07

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2000	2.443	8.017	1.00
2100	2.514	8.249	0.97
2200	2.584	8.478	0.95
2300	2.653	8.704	0.92
2500	2.787	9.145	0.88
2700	2.918	9.574	0.84
3000	3.108	10.198	0.79
3400	3.352	10.998	0.73
4000	3.701	12.144	0.66
5000	4.249	13.942	0.58
6000	4.765	15.632	0.51

Regulatory Compliance/Certifications

Agency

RoHS 2002/95/EC

Classification

Compliant

