Product Specifications

LDF4.5-50

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

Product Classification

Brand	HELIAX®
Product Type	Coaxial wireless cable

Construction Materials

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

Dimensions

Nominal Size	5/8 in
Cable Weight	0.27 lb/ft | 0.40 kg/m
Diameter Over Dielectric	18.034 mm | 0.710 in
Diameter Over Jacket	22.098 mm | 0.870 in
Inner Conductor OD	7.1120 mm | 0.2800 in
Outer Conductor OD	19.812 mm | 0.780 in

Electrical Specifications

Cable Impedance	50 ohm ±1 ohm
Capacitance	23.2 pF/ft | 76.1 pF/m
dc Resistance, Inner Conductor	0.220 ohms/kft | 0.722 ohms/km
dc Resistance, Outer Conductor	0.420 ohms/kft | 1.378 ohms/km
dc Test Voltage	5000 V
Inductance	0.187 µH/m | 0.057 µH/ft
Insulation Resistance	100000 Mohms•km
Jacket Spark Test Voltage (rms)	8000 V
Operating Frequency Band	1 – 6100 MHz
Peak Power	62.0 kW
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)

General Specifications

Brand	HELIAX®

Mechanical Specifications

Bending Moment	12.5 N-m | 9.2 ft lb
Flat Plate Crush Strength	70.0 lb/in | 1.3 kg/mm
Minimum Bend Radius, Multiple Bends	203.20 mm | 8.00 in
Minimum Bend Radius, Single Bend	76.20 mm | 3.00 in
Number of Bends, minimum	15
Number of Bends, typical	40
Tensile Strength	363 kg | 800 lb

Note

Performance Note	Values typical, unless otherwise stated

Standard Conditions

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

Return Loss/VSWR

Frequency Band	VSWR	Return Loss (dB)
806–960 MHz	1.13	24.30
1700–2000 MHz	1.13	24.30

Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
0.5	0.105	0.032	62.00
1	0.149	0.045	53.90
1.5	0.183	0.056	43.97
2	0.211	0.064	38.04
10	0.476	0.145	16.88
20	0.678	0.207	11.86
30	0.834	0.254	9.64
50	1.084	0.33	7.41
85	1.427	0.435	5.63
88	1.453	0.443	5.53
100	1.553	0.473	5.17
108	1.617	0.493	4.97
150	1.921	0.586	4.18
174	2.078	0.633	3.87
200	2.237	0.682	3.59
204	2.261	0.689	3.56
300	2.778	0.847	2.89
400	3.244	0.989	2.48
450	3.459	1.054	2.32
500	3.664	1.117	2.19
512	3.712	1.131	2.17
600	4.049	1.234	1.99
700	4.41	1.344	1.82
800	4.75	1.448	1.69
824	4.829	1.472	1.66
894	5.054	1.54	1.59
960	5.261	1.603	1.53
1000	5.383	1.641	1.49
1218	6.02	1.835	1.34
1250	6.109	1.862	1.32
1500	6.783	2.067	1.19
1700	7.292	2.222	1.10
1794	7.523	2.293	1.07
1800	7.538	2.297	1.07
2000	8.017	2.443	1.00
2100	8.249	2.514	0.97
2200	8.478	2.584	0.95
2300	8.704	2.653	0.92
2500	9.145	2.787	0.88
2700	9.574	2.918	0.84
3000	10.198	3.108	0.79
3400	10.998	3.352	0.73
3700	11.579	3.529	0.69
4000	12.144	3.701	0.66
5000	13.942	4.249	0.58
6000	15.632	4.765	0.51

** Values typical, guaranteed within 5%*

Regulatory Compliance/Certifications

Agency	Classification
RoHS 2011/65/EU	Compliant

China RoHS SJ/T 11364-2006	Below Maximum Concentration Value (MCV)
ISO 9001:2008	Designed, manufactured and/or distributed under this quality management system
CENELEC	EN 50575 compliant, Declaration of Performance (DoP) available