Product Specifications

LDF5-50A

LDF5-50A, HELIAX® Low Density Foam Coaxial Cable, corrugated copper, 7/8 in, black PE jacket

OBSOLETE

This part number is supported until: **May 9, 2017**

Replaced By

AVA5-50-E1	AVA5-50-E1, HELIAX® Andrew Virtual Air™ Coaxial Cable, corrugated copper, 7/8 in, black PE jacket
AVA5-50FX	AVA5-50FX, HELIAX® Andrew Virtual Air™ Coaxial Cable, corrugated copper, 7/8 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 tube
Jacket Color	Black

Dimensions

Nominal Size	7/8 in
Cable Weight	0.33 lb/ft | 0.49 kg/m
Diameter Over Dielectric	23.622 mm | 0.930 in
Diameter Over Jacket	26.162 mm | 1.030 in
Inner Conductor OD	8.7122 mm | 0.3430 in
Outer Conductor OD	24.892 mm | 0.980 in

Electrical Specifications

Cable Impedance	50 ohm ±1 ohm
Capacitance	22.8 pF/ft | 74.8 pF/m
dc Resistance, Inner Conductor	0.320 ohms/kft | 1.049 ohms/km
dc Resistance, Outer Conductor	0.360 ohms/kft | 1.181 ohms/km
dc Test Voltage	6000 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 – 5000 MHz
Peak Power	91.0 kW
Velocity	89%

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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 +60 °C (-94 °F to +140 °F)

General Specifications

Brand	HELIAX®

Mechanical Specifications

Bending Moment	22.4 N-m | 16.5 ft lb
Flat Plate Crush Strength	80.0 lb/in | 1.4 kg/mm
Minimum Bend Radius, Multiple Bends	254.00 mm | 10.00 in
Minimum Bend Radius, Single Bend	127.00 mm | 5.00 in
Number of Bends, minimum	15
Number of Bends, typical	50
Tensile Strength	159 kg | 350 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

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Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
0.5	0.081	0.025	91.00
1	0.115	0.035	79.19
1.5	0.141	0.043	64.60
2	0.163	0.05	55.89
10	0.366	0.112	24.81
20	0.521	0.159	17.44
30	0.641	0.195	14.18
50	0.833	0.254	10.91
85	1.096	0.334	8.29
88	1.116	0.34	8.14
100	1.193	0.364	7.62
108	1.242	0.378	7.32
150	1.475	0.449	6.16
174	1.595	0.486	5.70
200	1.716	0.523	5.30
204	1.734	0.529	5.24
300	2.13	0.649	4.27
400	2.486	0.758	3.66
450	2.65	0.808	3.43
500	2.806	0.855	3.24
512	2.843	0.866	3.20
600	3.1	0.945	2.93
700	3.375	1.029	2.69
800	3.633	1.107	2.50
824	3.694	1.126	2.46
894	3.865	1.178	2.35
960	4.022	1.226	2.26
1000	4.115	1.254	2.21
1218	4.599	1.402	1.98
1250	4.667	1.423	1.95
1500	5.178	1.578	1.76
1700	5.565	1.696	1.63
1794	5.74	1.75	1.58
1800	5.751	1.753	1.58
2000	6.114	1.863	1.49
2100	6.29	1.917	1.44
2200	6.464	1.97	1.41
2300	6.634	2.022	1.37
2500	6.968	2.124	1.30
2700	7.293	2.223	1.25
3000	7.764	2.366	1.17
3400	8.369	2.551	1.09
3700	8.808	2.684	1.03
4000	9.235	2.815	0.98
5000	10.59	3.228	0.86

** Values typical, guaranteed within 5%*