

LDF5-50A

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



OBSOLETE

Replaced By:

AVA5-50	AVA5-50, HELIAX® Andrew Virtual Air™ Coaxial Cable, corrugated copper, 7/8 in, black PE jacket (Halogen free jacketing non-fire-retardant)
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 (Halogen free jacketing non-fire-retardant)
CX-20D-SA	HELIAX® Andrew Virtual Air™ Coaxial Cable, corrugated copper, black PE jacket, special marking "SWCC SHOWA CX-20D-SA ANDREW HELIAX® 7/8" AVA5-50"

Product Classification

Product Type	Coaxial wireless cable
Product Brand	HELIAX®
Product Series	LDF5-50A

General Specifications

Flexibility	Standard
Jacket Color	Black
Performance Note	Attenuation values typical, guaranteed within 5%

Dimensions

Diameter Over Dielectric	23.622 mm 0.93 in
Diameter Over Jacket	26.162 mm 1.03 in
Inner Conductor OD	8.712 mm 0.343 in
Outer Conductor OD	24.892 mm 0.98 in

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Nominal Size 7/8 in

Electrical Specifications

Cable Impedance	50 ohm ±1 ohm
Capacitance	74.8 pF/m 22.799 pF/ft
dc Resistance, Inner Conductor	1.049 ohms/km 0.32 ohms/kft
dc Resistance, Outer Conductor	1.181 ohms/km 0.36 ohms/kft
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 kW
Velocity	89 %

Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
1.0	0.115	0.035	79.19
1.5	0.141	0.043	64.6
2.0	0.163	0.05	55.89
10.0	0.366	0.112	24.81
20.0	0.521	0.159	17.44
30.0	0.641	0.195	14.18
50.0	0.833	0.254	10.91
85.0	1.096	0.334	8.29
88.0	1.116	0.34	8.14
100.0	1.193	0.364	7.62
108.0	1.242	0.378	7.32
150.0	1.475	0.449	6.16
174.0	1.595	0.486	5.7
200.0	1.716	0.523	5.3
204.0	1.734	0.529	5.24
300.0	2.13	0.649	4.27
400.0	2.486	0.758	3.66
450.0	2.65	0.808	3.43

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460.0	2.682	0.817	3.39
500.0	2.806	0.855	3.24
512.0	2.843	0.866	3.2
600.0	3.1	0.945	2.93
700.0	3.375	1.029	2.69
800.0	3.633	1.107	2.5
824.0	3.694	1.126	2.46
894.0	3.865	1.178	2.35
960.0	4.022	1.226	2.26
1000.0	4.115	1.254	2.21
1218.0	4.599	1.402	1.98
1250.0	4.667	1.423	1.95
1500.0	5.178	1.578	1.76
1700.0	5.565	1.696	1.63
1794.0	5.74	1.75	1.58
1800.0	5.751	1.753	1.58
2000.0	6.114	1.863	1.49
2100.0	6.29	1.917	1.44
2200.0	6.464	1.97	1.41
2300.0	6.634	2.022	1.37
2500.0	6.968	2.124	1.3
2700.0	7.293	2.223	1.25
3000.0	7.764	2.366	1.17
3400.0	8.369	2.551	1.09
3600.0	8.663	2.64	1.05
3700.0	8.808	2.684	1.03
3800.0	8.951	2.728	1.02
3900.0	9.094	2.772	1
4000.0	9.235	2.815	0.98
4100.0	9.375	2.857	0.97
4200.0	9.514	2.9	0.96
4300.0	9.651	2.942	0.94
4400.0	9.788	2.983	0.93
4500.0	9.924	3.025	0.92
4600.0	10.059	3.066	0.9

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4700.0	10.193	3.107	0.89
4800.0	10.326	3.147	0.88
4900.0	10.458	3.188	0.87
5000.0	10.59	3.228	0.86

VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
806–960 MHz	1.13	24.3
1700–2000 MHz	1.13	24.3

Material Specifications

Dielectric Material	Foam PE
Jacket Material	PE
Inner Conductor Material	Copper tube
Outer Conductor Material	Corrugated copper

Mechanical Specifications

Minimum Bend Radius, multiple Bends	254 mm 10 in
Minimum Bend Radius, single Bend	127 mm 5 in
Number of Bends, minimum	15
Number of Bends, typical	50
Tensile Strength	159 kg 350.535 lb
Bending Moment	22.4 N-m 198.257 in lb
Flat Plate Crush Strength	1.4 kg/mm 78.396 lb/in

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

Packaging and Weights

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Cable weight

0.49 kg/m | 0.329 lb/ft