LDF12RK-50

LDF12-50, HELIAX® Low Density Foam Coaxial Cable, corrugated copper, 2-1/4 in, black non-halogenated, fire retardant polyolefin jacket

OBSOLETE

Product Classification

Brand	HELIAX®
Product Series	LDF12-50
Product Type	Coaxial wireless cable

Construction Materials

Jacket Material	Non-halogenated, fire retardant polyolefin
Outer Conductor Material	Corrugated copper
Dielectric Material	Foam PE
Flexibility	Standard
Inner Conductor Material	Corrugated copper tube
Jacket Color	Black

Dimensions

Nominal Size	2-1/4 in
Cable Weight	1.22 lb/ft
Diameter Over Dielectric	52.832 mm | 2.080 in
Diameter Over Jacket	59.690 mm | 2.350 in
Inner Conductor OD	21.0820 mm | 0.8300 in
Outer Conductor OD	55.880 mm | 2.200 in

Electrical Specifications

Cable Impedance	50 ohm ±1 ohm
Capacitance	23.0 µF/ft | 74.0 pF/m
dc Resistance, Inner Conductor	0.210 ohms/kft | 0.689 ohms/km
dc Resistance, Outer Conductor	0.090 ohms/kft | 0.295 ohms/km
dc Test Voltage	13000 V
Inductance	0.190 µH/m | 0.058 µH/ft
Insulation Resistance	100000 Mohms•km
Jacket Spark Test Voltage (rms)	10000 V
Operating Frequency Band	1 – 2200 MHz
Peak Power	425.0 kW

Velocity	88 %

Environmental Specifications

Installation Temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Operating Temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Storage Temperature	-40 °C to +60 °C (-40 °F to +140 °F)

Mechanical Specifications

Bending Moment	94.9 N-m | 70.0 ft lb
Fire Retardancy Test Method	UL 1666/CATVR
Flat Plate Crush Strength	150.0 lb/in | 2.7 kg/mm
Minimum Bend Radius, Multiple Bends	558.80 mm | 22.00 in
Minimum Bend Radius, Single Bend	241.30 mm | 9.50 in
Number of Bends, minimum	15
Number of Bends, typical	50
Smoke Index Test Method	IEC 61034
Tensile Strength	680 kg | 1500 lb
Toxicity Index Test Method	IEC 60754-1 | IEC 60754-2

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)
870–960 MHz	1.15	23.13
1700–2000 MHz	1.15	23.13

Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
0.5	0.037	0.011	323.89
1	0.052	0.016	228.42
1.5	0.064	0.02	186.13
2	0.074	0.023	160.92
10	0.169	0.052	70.86
20	0.242	0.074	49.54
30	0.299	0.091	40.10
50	0.391	0.119	30.64
85	0.519	0.158	23.08
88	0.529	0.161	22.65
100	0.566	0.173	21.14
108	0.591	0.18	20.28
150	0.707	0.215	16.95
174	0.767	0.234	15.61
200	0.829	0.253	14.45
204	0.838	0.255	14.29
300	1.041	0.317	11.51
400	1.227	0.374	9.76
450	1.313	0.4	9.12
460	1.33	0.405	9.00
460	1.33	0.405	9.00
500	1.396	0.426	8.58
512	1.416	0.432	8.46
600	1.554	0.474	7.71
700	1.703	0.519	7.03
800	1.845	0.562	6.49
824	1.878	0.572	6.38
894	1.973	0.601	6.07
960	2.06	0.628	5.81
1000	2.112	0.644	5.67
1218	2.385	0.727	5.02
1250	2.423	0.739	4.94
1500	2.716	0.828	4.41
1700	2.94	0.896	4.07
1794	3.042	0.927	3.94
1800	3.049	0.929	3.93
2000	3.262	0.994	3.67
2100	3.366	1.026	3.56
2200	3.469	1.057	3.45

** Values typical, guaranteed within 5%*

Regulatory Compliance/Certifications

Agency	Classification
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system

COMMSCOPE®