

Product Specifications



LDF4RN-50A

LDF4-50, HELIAX® Low Density Foam Coaxial Cable, corrugated copper, 1/2 in, gray non-halogenated, fire retardant polyolefin jacket



CHARACTERISTICS

Construction Materials

Jacket Material	Non-halogenated, fire retardant polyolefin
Dielectric Material	Foam PE
Flexibility	Standard
Inner Conductor Material	Copper-clad aluminum wire
Jacket Color	Gray
Outer Conductor Material	Corrugated copper

Dimensions

Nominal Size	1/2 in
Cable Weight	0.15 lb/ft
Diameter Over Dielectric	0.510 in 12.954 mm
Diameter Over Jacket	0.630 in 16.002 mm
Inner Conductor OD	0.190 in 4.826 mm
Outer Conductor OD	0.550 in 13.970 mm

Electrical Specifications

Cable Impedance	50 ohm \pm 1 ohm
Capacitance	23 pF/ft 7579 pF/m
dc Resistance, Inner Conductor	1.480 ohms/kft
dc Resistance, Outer Conductor	0.580 ohms/kft
dc Test Voltage	4000 V
Inductance	0.058 μ H/ft 0.190 μ H/m
Insulation Resistance	100000 MOhm
Jacket Spark Test Voltage (rms)	5000 V
Operating Frequency Band	1 – 8800 MHz
Peak Power	40.0 kW
Pulse Reflection	0.5%
Velocity	88%

Environmental Specifications

Installation Temperature	-25 °C to +60 °C (-13 °F to +140 °F)
Operating Temperature	-30 °C to +80 °C (-22 °F to +176 °F)
Storage Temperature	-30 °C to +80 °C (-22 °F to +176 °F)

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Mechanical Specifications

Bending Moment	2.8 ft lb 3.8 N-m
Flat Plate Crush Strength	110.0 lb/in
Minimum Bend Radius, Multiple Bends	5.00 in 127.00 mm
Minimum Bend Radius, Single Bend	2.00 in 50.80 mm
Number of Bends, minimum	15
Number of Bends, typical	50
Tensile Strength	250 lb 113 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	0.045	0.149	40.00
1	0.064	0.211	36.11
1.5	0.079	0.259	29.46
2	0.091	0.299	25.50
10	0.205	0.672	11.35
20	0.291	0.954	7.99
30	0.357	1.172	6.51
50	0.463	1.521	5.02
88	0.619	2.031	3.76
100	0.661	2.169	3.52
108	0.688	2.256	3.38
150	0.815	2.673	2.85
174	0.88	2.887	2.64
200	0.946	3.103	2.46
300	1.169	3.835	1.99
400	1.36	4.462	1.71
450	1.447	4.749	1.61
500	1.53	5.021	1.52
512	1.55	5.085	1.50
600	1.686	5.533	1.38
700	1.831	6.009	1.27
800	1.968	6.456	1.18
824	1.999	6.56	1.16
894	2.089	6.855	1.11
960	2.171	7.124	1.07
1000	2.22	7.284	1.05
1250	2.507	8.226	0.93
1500	2.771	9.093	0.84

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1700	2.97	9.744	0.78
1800	3.066	10.058	0.76
2000	3.251	10.666	0.72
2100	3.341	10.961	0.70
2200	3.429	11.251	0.68
2300	3.516	11.535	0.66
2500	3.685	12.09	0.63
2700	3.849	12.627	0.60
3000	4.086	13.407	0.57
3400	4.389	14.401	0.53
4000	4.82	15.815	0.48
5000	5.489	18.01	0.42
6000	6.113	20.055	0.38
8000	7.262	23.826	0.32

Regulatory Compliance/Certifications

Agency

UL/ETL Certification
RoHS 2002/95/EC

Classification

CATVR
Compliant