



LDF1-50

LDF1-50, HELIAX® Low Density Foam Coaxial Cable, corrugated copper, 1/4 in, black PE jacket

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 | 1/4 in |
| Cable Weight | 0.06 lb/ft 0.09 kg/m |
| Diameter Over Dielectric | 6.858 mm 0.270 in |
| Diameter Over Jacket | 8.763 mm 0.345 in |
| Inner Conductor OD | 2.5400 mm 0.1000 in |
| Outer Conductor OD | 7.874 mm 0.310 in |

Electrical Specifications

| | |
|---------------------------------|------------------------------------|
| Cable Impedance | 50 ohm \pm 1 ohm |
| Capacitance | 23.4 pF/ft 76.8 pF/m |
| dc Resistance, Inner Conductor | 1.570 ohms/kft 5.151 ohms/km |
| dc Resistance, Outer Conductor | 1.220 ohms/kft 4.003 ohms/km |
| dc Test Voltage | 2200 V |
| Inductance | 0.194 μ H/m 0.059 μ H/ft |
| Insulation Resistance | 100000 Mohms•km |
| Jacket Spark Test Voltage (rms) | 5000 V |
| Operating Frequency Band | 1 – 15800 MHz |
| Peak Power | 12.1 kW |
| Velocity | 86% |

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 | 1.4 N-m 1.0 ft lb |
| Flat Plate Crush Strength | 80.0 lb/in 1.4 kg/mm |
| Minimum Bend Radius, Multiple Bends | 76.20 mm 3.00 in |

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| | |
|----------------------------------|--------------------|
| Minimum Bend Radius, Single Bend | 38.10 mm 1.50 in |
| Number of Bends, minimum | 15 |
| Number of Bends, typical | 30 |
| Tensile Strength | 91 kg 200 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 | 1.15 | 23.00 |
| 1700–2000 MHz | 1.15 | 23.00 |

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Attenuation

| Frequency (MHz) | Attenuation (dB/100 m) | Attenuation (dB/100 ft) | Average Power (kW) |
|-----------------|------------------------|-------------------------|--------------------|
| 0.5 | 0.278 | 0.085 | 12.10 |
| 1 | 0.394 | 0.12 | 12.10 |
| 1.5 | 0.483 | 0.147 | 12.10 |
| 2 | 0.558 | 0.17 | 12.10 |
| 10 | 1.254 | 0.382 | 5.83 |
| 20 | 1.781 | 0.543 | 4.11 |
| 30 | 2.188 | 0.667 | 3.34 |
| 50 | 2.838 | 0.865 | 2.58 |
| 85 | 3.724 | 1.135 | 1.96 |
| 88 | 3.791 | 1.156 | 1.93 |
| 100 | 4.049 | 1.234 | 1.81 |
| 108 | 4.213 | 1.284 | 1.74 |
| 150 | 4.993 | 1.522 | 1.47 |
| 174 | 5.392 | 1.644 | 1.36 |
| 200 | 5.798 | 1.767 | 1.26 |
| 204 | 5.858 | 1.785 | 1.25 |
| 300 | 7.168 | 2.185 | 1.02 |
| 400 | 8.342 | 2.543 | 0.88 |
| 450 | 8.88 | 2.706 | 0.82 |
| 500 | 9.391 | 2.862 | 0.78 |
| 512 | 9.511 | 2.899 | 0.77 |
| 600 | 10.351 | 3.155 | 0.71 |
| 700 | 11.244 | 3.427 | 0.65 |
| 800 | 12.084 | 3.683 | 0.61 |
| 824 | 12.278 | 3.742 | 0.60 |
| 894 | 12.833 | 3.911 | 0.57 |
| 960 | 13.339 | 4.066 | 0.55 |
| 1000 | 13.639 | 4.157 | 0.54 |
| 1218 | 15.192 | 4.63 | 0.48 |
| 1250 | 15.41 | 4.697 | 0.47 |
| 1500 | 17.04 | 5.194 | 0.43 |
| 1700 | 18.266 | 5.567 | 0.40 |
| 1800 | 18.858 | 5.748 | 0.39 |
| 2000 | 20.003 | 6.097 | 0.37 |
| 2100 | 20.559 | 6.266 | 0.36 |
| 2200 | 21.104 | 6.432 | 0.35 |
| 2300 | 21.64 | 6.596 | 0.34 |
| 2500 | 22.686 | 6.914 | 0.32 |
| 2700 | 23.701 | 7.224 | 0.31 |
| 3000 | 25.171 | 7.672 | 0.29 |
| 3400 | 27.048 | 8.244 | 0.27 |
| 3700 | 28.403 | 8.657 | 0.26 |
| 4000 | 29.719 | 9.058 | 0.25 |
| 5000 | 33.871 | 10.323 | 0.22 |
| 6000 | 37.742 | 11.503 | 0.19 |
| 8000 | 44.888 | 13.681 | 0.16 |
| 8800 | 47.579 | 14.501 | 0.15 |
| 10000 | 51.475 | 15.689 | 0.14 |
| 12000 | 57.664 | 17.575 | 0.13 |
| 14000 | 63.552 | 19.37 | 0.12 |
| 15800 | 68.646 | 20.922 | 0.11 |

* Values typical, guaranteed within 5%

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Regulatory Compliance/Certifications

Agency

RoHS 2011/65/EU

China RoHS SJ/T 11364-2006

ISO 9001:2008

Classification

Compliant

Below Maximum Concentration Value (MCV)

Designed, manufactured and/or distributed under this quality management system

