

L2-PTMTM-5M-HF

LDF2-50 SureFlex® Jumper with interface types TNC Male and TNC Male, 5M



Product Classification

| | |
|-----------------------|--------------------------------------|
| Product Type | Wireless transmission cable assembly |
| Product Brand | HELIAX® |
| Product Series | LDF2-50 |

General Specifications

| | |
|---|----------|
| Body Style, Connector A | Straight |
| Body Style, Connector B | Straight |
| Interface, Connector A | TNC Male |
| Interface, Connector B | TNC Male |
| Specification Sheet Revision Level | A |

Dimensions

| | |
|---------------------|-----------------|
| Length | 5 m 16.404 ft |
| Nominal Size | 3/8 in |

VSWR/Return Loss

| Frequency Band | VSWR | Return Loss (dB) |
|----------------|------|------------------|
| 1000–11000 MHz | 1.93 | 10 |

Jumper Assembly Sample Label

L2-PTMTM-5M-HF



Environmental Specifications

Immersion Test Method Meets IEC 60529:2001, IP68 in mated condition

Regulatory Compliance/Certifications

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

Included Products

- 35422-23 – Heat Treated LDF2-50, HELIAX® Low Density Foam Coaxial Cable, corrugated copper, 3/8 in, black PE jacket
- L2TTM-PL – TNC Male Positive Lock for 3/8 in LDF2-50 cable
- LDF2-50 – LDF2-50, HELIAX® Low Density Foam Coaxial Cable, corrugated copper, 3/8 in, black PE jacket

Heat Treated LDF2-50, HELIAX® Low Density Foam Coaxial Cable, corrugated copper, 3/8 in, black PE jacket



Product Classification

| | |
|-----------------------|------------------------|
| Product Type | Coaxial wireless cable |
| Product Brand | HELIAX® SureFlex® |
| Product Series | LDF2-50 |

General Specifications

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

Dimensions

| | |
|---------------------------------|---------------------|
| Diameter Over Dielectric | 8.636 mm 0.34 in |
| Diameter Over Jacket | 11.176 mm 0.44 in |
| Inner Conductor OD | 3.048 mm 0.12 in |
| Outer Conductor OD | 9.652 mm 0.38 in |
| Nominal Size | 3/8 in |

Electrical Specifications

| | |
|---------------------------------------|-------------------------------|
| Cable Impedance | 50 ohm ±1 ohm |
| Capacitance | 75.5 pF/m 23.012 pF/ft |
| dc Resistance, Inner Conductor | 3.478 ohms/km 1.06 ohms/kft |
| dc Resistance, Outer Conductor | 2.854 ohms/km 0.87 ohms/kft |
| dc Test Voltage | 2500 V |
| Inductance | 0.19 µH/m 0.058 µH/ft |
| Insulation Resistance | 100000 MOhms-km |

35422-23

| | |
|--|---------------|
| Jacket Spark Test Voltage (rms) | 5000 V |
| Operating Frequency Band | 1 – 13000 MHz |
| Peak Power | 15.6 kW |
| Velocity | 85 % |

Attenuation

| Frequency (MHz) | Attenuation (dB/100 m) | Attenuation (dB/100 ft) | Average Power (kW) |
|------------------------|-------------------------------|--------------------------------|---------------------------|
| 1.0 | 0.332 | 0.101 | 15.6 |
| 1.5 | 0.407 | 0.124 | 15.6 |
| 2.0 | 0.471 | 0.143 | 15.6 |
| 10.0 | 1.059 | 0.323 | 7.28 |
| 20.0 | 1.503 | 0.458 | 5.13 |
| 30.0 | 1.847 | 0.563 | 4.17 |
| 50.0 | 2.397 | 0.73 | 3.22 |
| 85.0 | 3.146 | 0.959 | 2.45 |
| 88.0 | 3.203 | 0.976 | 2.41 |
| 100.0 | 3.421 | 1.043 | 2.25 |
| 108.0 | 3.559 | 1.085 | 2.17 |
| 150.0 | 4.219 | 1.286 | 1.83 |
| 174.0 | 4.558 | 1.389 | 1.69 |
| 200.0 | 4.901 | 1.494 | 1.57 |
| 204.0 | 4.952 | 1.509 | 1.56 |
| 300.0 | 6.062 | 1.847 | 1.27 |
| 400.0 | 7.057 | 2.151 | 1.09 |
| 450.0 | 7.513 | 2.29 | 1.03 |
| 460.0 | 7.601 | 2.317 | 1.01 |
| 500.0 | 7.947 | 2.422 | 0.97 |
| 512.0 | 8.048 | 2.453 | 0.96 |
| 600.0 | 8.761 | 2.67 | 0.88 |
| 700.0 | 9.519 | 2.901 | 0.81 |
| 800.0 | 10.232 | 3.119 | 0.75 |
| 824.0 | 10.398 | 3.169 | 0.74 |
| 894.0 | 10.869 | 3.313 | 0.71 |
| 960.0 | 11.299 | 3.444 | 0.68 |
| 1000.0 | 11.554 | 3.521 | 0.67 |

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| | | | |
|----------------|--------|--------|------|
| 1218.0 | 12.874 | 3.924 | 0.6 |
| 1250.0 | 13.059 | 3.98 | 0.59 |
| 1500.0 | 14.446 | 4.403 | 0.53 |
| 1700.0 | 15.49 | 4.721 | 0.5 |
| 1794.0 | 15.964 | 4.866 | 0.48 |
| 1800.0 | 15.994 | 4.875 | 0.48 |
| 2000.0 | 16.97 | 5.172 | 0.45 |
| 2100.0 | 17.443 | 5.316 | 0.44 |
| 2200.0 | 17.908 | 5.458 | 0.43 |
| 2300.0 | 18.365 | 5.597 | 0.42 |
| 2500.0 | 19.257 | 5.869 | 0.4 |
| 2700.0 | 20.122 | 6.133 | 0.38 |
| 3000.0 | 21.376 | 6.515 | 0.36 |
| 3400.0 | 22.978 | 7.003 | 0.34 |
| 3600.0 | 23.754 | 7.24 | 0.32 |
| 3700.0 | 24.136 | 7.356 | 0.32 |
| 3800.0 | 24.514 | 7.471 | 0.31 |
| 3900.0 | 24.888 | 7.586 | 0.31 |
| 4000.0 | 25.26 | 7.699 | 0.31 |
| 4100.0 | 25.627 | 7.811 | 0.3 |
| 4200.0 | 25.992 | 7.922 | 0.3 |
| 4300.0 | 26.354 | 8.032 | 0.29 |
| 4400.0 | 26.713 | 8.142 | 0.29 |
| 4500.0 | 27.069 | 8.25 | 0.28 |
| 4600.0 | 27.422 | 8.358 | 0.28 |
| 4700.0 | 27.773 | 8.465 | 0.28 |
| 4800.0 | 28.12 | 8.571 | 0.27 |
| 4900.0 | 28.466 | 8.676 | 0.27 |
| 5000.0 | 28.809 | 8.781 | 0.27 |
| 6000.0 | 32.121 | 9.79 | 0.24 |
| 8000.0 | 38.244 | 11.656 | 0.2 |
| 8800.0 | 40.551 | 12.359 | 0.19 |
| 10000.0 | 43.894 | 13.378 | 0.18 |
| 12000.0 | 49.209 | 14.998 | 0.16 |

Material Specifications

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| | |
|---------------------------------|---------------------------|
| Dielectric Material | Foam PE |
| Jacket Material | PE |
| Inner Conductor Material | Copper-clad aluminum wire |
| Outer Conductor Material | Corrugated copper |

Mechanical Specifications

| | |
|--|-------------------------|
| Minimum Bend Radius, multiple Bends | 95.25 mm 3.75 in |
| Minimum Bend Radius, single Bend | 40.64 mm 1.6 in |
| Number of Bends, minimum | 15 |
| Number of Bends, typical | 50 |
| Tensile Strength | 113 kg 249.122 lb |
| Bending Moment | 1.9 N-m 16.816 in lb |
| Flat Plate Crush Strength | 2 kg/mm 111.995 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 +85 °C (-94 °F to +185 °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

| | |
|---------------------|-------------------------|
| Cable weight | 0.12 kg/m 0.081 lb/ft |
|---------------------|-------------------------|

Regulatory Compliance/Certifications

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

L2TTM-PL



TNC Male Positive Lock for 3/8 in LDF2-50 cable

Product Classification

| | |
|-----------------------|----------------------------------|
| Product Type | Wireless and radiating connector |
| Product Brand | HELIAX® |
| Product Series | LDF2-50 |

General Specifications

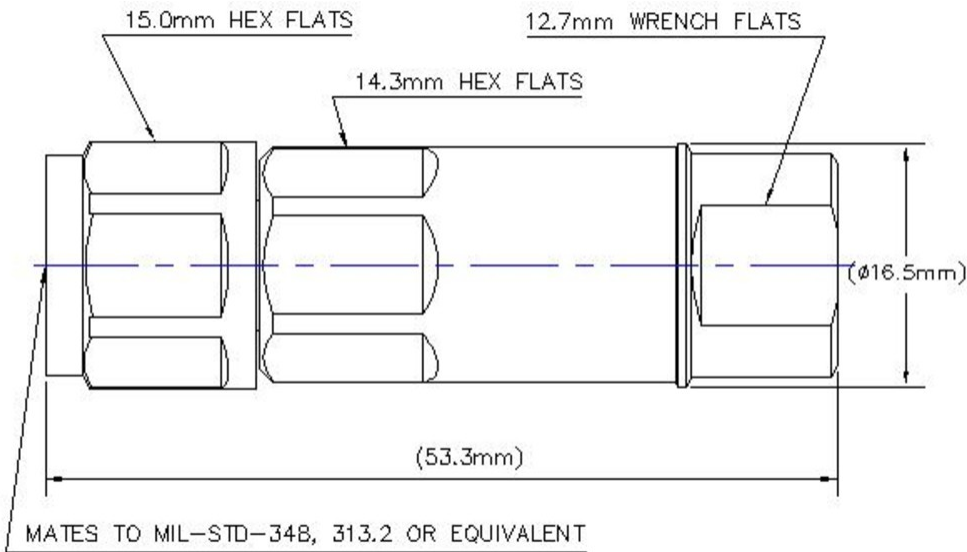
| | |
|--|------------|
| Body Style | Straight |
| Cable Family | LDF2-50 |
| Inner Contact Attachment Method | Captivated |
| Inner Contact Plating | Gold |
| Interface | TNC Male |
| Mounting Angle | Straight |
| Outer Contact Attachment Method | Ring-flare |
| Outer Contact Plating | Trimetal |
| Pressurizable | No |

Dimensions

| | |
|---------------------|--------------------|
| Height | 16.51 mm 0.65 in |
| Width | 16.51 mm 0.65 in |
| Length | 53.85 mm 2.12 in |
| Diameter | 16.51 mm 0.65 in |
| Nominal Size | 3/8 in |

Outline Drawing

L2TTM-PL



Electrical Specifications

| | |
|---|--------------------|
| 3rd Order IMD at Frequency | -107 dBm @ 910 MHz |
| Insertion Loss Coefficient, typical | 0.05 |
| Average Power at Frequency | 0.7 kW @ 900 MHz |
| Cable Impedance | 50 ohm |
| Connector Impedance | 50 ohm |
| dc Test Voltage | 1500 V |
| Inner Contact Resistance, maximum | 1.5 mOhm |
| Insulation Resistance, minimum | 5000 MOhm |
| Operating Frequency Band | 0 – 10000 MHz |
| Outer Contact Resistance, maximum | 0.4 mOhm |
| Peak Power, maximum | 5 kW |
| RF Operating Voltage, maximum (vrms) | 500 V |
| Shielding Effectiveness | -110 dB |

VSWR/Return Loss

| Frequency Band | VSWR | Return Loss (dB) |
|----------------|-------|------------------|
| 0–960 MHz | 1.02 | 40.09 |
| 960–2200 MHz | 1.063 | 30.3 |

L2TTM-PL

| | | |
|-----------------------|-------|-------|
| 2200–2700 MHz | 1.106 | 25.96 |
| 2700–4000 MHz | 1.135 | 23.98 |
| 4000–6000 MHz | 1.222 | 20.01 |
| 6000–8000 MHz | 1.26 | 19 |
| 8000–10000 MHz | 1.38 | 16 |

Mechanical Specifications

| | |
|--|---------------------------|
| Attachment Durability | 25 cycles |
| Connector Retention Tensile Force | 671.68 N 151 lbf |
| Connector Retention Torque | 2.7 N-m 23.897 in lb |
| Coupling Nut Proof Torque | 1.7 N-m 15.046 in lb |
| Coupling Nut Retention Force | 445 N 100.04 lbf |
| Coupling Nut Retention Force Method | MIL-C-39012C-3.25, 4.6.22 |
| Insertion Force | 14.99 N 3.37 lbf |
| Insertion Force Method | IEC 61169-1:15.2.4 |
| Interface Durability | 500 cycles |
| Interface Durability Method | IEC 61169-17:9.5 |
| Mechanical Shock Test Method | IEC 60068-2-27 |

Environmental Specifications

| | |
|---|---------------------------------------|
| Operating Temperature | -55 °C to +85 °C (-67 °F to +185 °F) |
| Storage Temperature | -65 °C to +125 °C (-85 °F to +257 °F) |
| Attenuation, Ambient Temperature | 20 °C 68 °F |
| Average Power, Ambient Temperature | 40 °C 104 °F |
| Average Power, Inner Conductor Temperature | 100 °C 212 °F |
| Corrosion Test Method | IEC 60068-2-11 |
| Immersion Depth | 1 m |
| Immersion Test Mating | Mated |
| Immersion Test Method | IEC 60529:2001, IP68 |
| Moisture Resistance Test Method | IEC 60068-2-3 |
| Thermal Shock Test Method | IEC 60068-2-14 |
| Vibration Test Method | IEC 60068-2-6 |

L2TTM-PL

Packaging and Weights

Weight, net 48.84 g | 0.108 lb

Regulatory Compliance/Certifications

| Agency | Classification |
|---------------|--|
| CHINA-ROHS | Below maximum concentration value |
| ISO 9001:2015 | Designed, manufactured and/or distributed under this quality management system |
| ROHS | Compliant |
| UK-ROHS | Compliant |



* Footnotes

Insertion Loss Coefficient, typical 0.05√freq (GHz) (not applicable for elliptical waveguide)

Immersion Depth Immersion at specified depth for 24 hours

LDF2-50

LDF2-50, HELIAX® Low Density Foam Coaxial Cable, corrugated copper, 3/8 in, black PE jacket



Product Classification

| | |
|-----------------------|------------------------|
| Product Type | Coaxial wireless cable |
| Product Brand | HELIAX® SureFlex® |
| Product Series | LDF2-50 |

General Specifications

| | |
|-------------------------|--|
| Product Number | 520098202/00 SZ520098202/00 |
| Flexibility | Standard |
| Jacket Color | Black |
| Performance Note | Attenuation values typical, guaranteed within 5% |

Dimensions

| | |
|---------------------------------|---------------------|
| Diameter Over Dielectric | 8.636 mm 0.34 in |
| Diameter Over Jacket | 11.176 mm 0.44 in |
| Inner Conductor OD | 3.124 mm 0.123 in |
| Outer Conductor OD | 9.652 mm 0.38 in |
| Nominal Size | 3/8 in |

Electrical Specifications

| | |
|---------------------------------------|-----------------------------------|
| Cable Impedance | 50 ohm \pm 1 ohm |
| Capacitance | 75.5 pF/m 23.012 pF/ft |
| dc Resistance, Inner Conductor | 3.478 ohms/km 1.06 ohms/kft |
| dc Resistance, Outer Conductor | 2.854 ohms/km 0.87 ohms/kft |
| dc Test Voltage | 2500 V |
| Inductance | 0.19 μ H/m 0.058 μ H/ft |

LDF2-50

| | |
|--|-----------------|
| Insulation Resistance | 100000 MOhms-km |
| Jacket Spark Test Voltage (rms) | 5000 V |
| Operating Frequency Band | 1 – 13000 MHz |
| Peak Power | 15.6 kW |
| Velocity | 85 % |

Attenuation

| Frequency (MHz) | Attenuation (dB/100 m) | Attenuation (dB/100 ft) | Average Power (kW) |
|------------------------|-------------------------------|--------------------------------|---------------------------|
| 1.0 | 0.332 | 0.101 | 15.6 |
| 1.5 | 0.407 | 0.124 | 15.6 |
| 2.0 | 0.471 | 0.143 | 15.6 |
| 10.0 | 1.059 | 0.323 | 7.28 |
| 20.0 | 1.503 | 0.458 | 5.13 |
| 30.0 | 1.847 | 0.563 | 4.17 |
| 50.0 | 2.397 | 0.73 | 3.22 |
| 85.0 | 3.146 | 0.959 | 2.45 |
| 88.0 | 3.203 | 0.976 | 2.41 |
| 100.0 | 3.421 | 1.043 | 2.25 |
| 108.0 | 3.559 | 1.085 | 2.17 |
| 150.0 | 4.219 | 1.286 | 1.83 |
| 174.0 | 4.558 | 1.389 | 1.69 |
| 200.0 | 4.901 | 1.494 | 1.57 |
| 204.0 | 4.952 | 1.509 | 1.56 |
| 300.0 | 6.062 | 1.847 | 1.27 |
| 400.0 | 7.057 | 2.151 | 1.09 |
| 450.0 | 7.513 | 2.29 | 1.03 |
| 460.0 | 7.601 | 2.317 | 1.01 |
| 500.0 | 7.947 | 2.422 | 0.97 |
| 512.0 | 8.048 | 2.453 | 0.96 |
| 600.0 | 8.761 | 2.67 | 0.88 |
| 700.0 | 9.519 | 2.901 | 0.81 |
| 800.0 | 10.232 | 3.119 | 0.75 |
| 824.0 | 10.398 | 3.169 | 0.74 |
| 894.0 | 10.869 | 3.313 | 0.71 |
| 960.0 | 11.299 | 3.444 | 0.68 |

LDF2-50

| | | | |
|----------------|--------|--------|------|
| 1000.0 | 11.554 | 3.521 | 0.67 |
| 1218.0 | 12.874 | 3.924 | 0.6 |
| 1250.0 | 13.059 | 3.98 | 0.59 |
| 1500.0 | 14.446 | 4.403 | 0.53 |
| 1700.0 | 15.49 | 4.721 | 0.5 |
| 1794.0 | 15.964 | 4.866 | 0.48 |
| 1800.0 | 15.994 | 4.875 | 0.48 |
| 2000.0 | 16.97 | 5.172 | 0.45 |
| 2100.0 | 17.443 | 5.316 | 0.44 |
| 2200.0 | 17.908 | 5.458 | 0.43 |
| 2300.0 | 18.365 | 5.597 | 0.42 |
| 2500.0 | 19.257 | 5.869 | 0.4 |
| 2700.0 | 20.122 | 6.133 | 0.38 |
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| 3400.0 | 22.978 | 7.003 | 0.34 |
| 3600.0 | 23.754 | 7.24 | 0.32 |
| 3700.0 | 24.136 | 7.356 | 0.32 |
| 3800.0 | 24.514 | 7.471 | 0.31 |
| 3900.0 | 24.888 | 7.586 | 0.31 |
| 4000.0 | 25.26 | 7.699 | 0.31 |
| 4100.0 | 25.627 | 7.811 | 0.3 |
| 4200.0 | 25.992 | 7.922 | 0.3 |
| 4300.0 | 26.354 | 8.032 | 0.29 |
| 4400.0 | 26.713 | 8.142 | 0.29 |
| 4500.0 | 27.069 | 8.25 | 0.28 |
| 4600.0 | 27.422 | 8.358 | 0.28 |
| 4700.0 | 27.773 | 8.465 | 0.28 |
| 4800.0 | 28.12 | 8.571 | 0.27 |
| 4900.0 | 28.466 | 8.676 | 0.27 |
| 5000.0 | 28.809 | 8.781 | 0.27 |
| 6000.0 | 32.121 | 9.79 | 0.24 |
| 8000.0 | 38.244 | 11.656 | 0.2 |
| 8800.0 | 40.551 | 12.359 | 0.19 |
| 10000.0 | 43.894 | 13.378 | 0.18 |
| 12000.0 | 49.209 | 14.998 | 0.16 |

LDF2-50

Material Specifications

| | |
|---------------------------------|---------------------------|
| Dielectric Material | Foam PE |
| Jacket Material | PE |
| Inner Conductor Material | Copper-clad aluminum wire |
| Outer Conductor Material | Corrugated copper |

Mechanical Specifications

| | |
|--|-------------------------|
| Minimum Bend Radius, multiple Bends | 95.25 mm 3.75 in |
| Minimum Bend Radius, single Bend | 40.64 mm 1.6 in |
| Number of Bends, minimum | 15 |
| Number of Bends, typical | 50 |
| Tensile Strength | 113 kg 249.122 lb |
| Bending Moment | 1.9 N-m 16.816 in lb |
| Flat Plate Crush Strength | 2 kg/mm 111.995 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 +85 °C (-94 °F to +185 °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

| | |
|---------------------|-------------------------|
| Cable weight | 0.12 kg/m 0.081 lb/ft |
|---------------------|-------------------------|

Regulatory Compliance/Certifications

| Agency | Classification |
|---------------|--|
| CHINA-ROHS | Below maximum concentration value |
| ISO 9001:2015 | Designed, manufactured and/or distributed under this quality management system |
| REACH-SVHC | Compliant as per SVHC revision on www.commscope.com/ProductCompliance |
| ROHS | Compliant |
| UK-ROHS | Compliant |

