

# L4A-HMDM-8M-P

LDF4-50A SureFlex® Jumper with interface types 4.3-10 Male and 7-16 DIN Male 8m



- If there are threads along the entire device port length, the HELIAX® SureGuard weatherproofing solutions will only seal properly if the HSG-M29-ADPT adapter is installed on the device port
- WARNING: DO NOT MATE WITH 4.1-9.5 DIN

## Product Classification

|                       |                               |
|-----------------------|-------------------------------|
| <b>Product Type</b>   | SureFlex® Premium, static PIM |
| <b>Product Brand</b>  | HELIAX®   SureFlex®           |
| <b>Product Series</b> | LDF4-50A                      |

## General Specifications

|   |               |
|---|---------------|
| <b>Body Style, Connector A</b>            | Straight      |
| <b>Body Style, Connector B</b>            | Straight      |
| <b>Interface, Connector A</b>             | 4.3-10 Male   |
| <b>Interface, Connector B</b>             | 7-16 DIN Male |
| <b>Specification Sheet Revision Level</b> | A             |

## Dimensions

|                     |                 |
|---------------------|-----------------|
| <b>Length</b>       | 8 m   26.247 ft |
| <b>Nominal Size</b> | 1/2 in          |

## Electrical Specifications

|   |                      |
|---|----------------------|
| <b>3rd Order IMD Static</b>             | -116 dBm             |
| <b>3rd Order IMD Static Test Method</b> | Two +43 dBm carriers |
| <b>DTF, Connector A</b>                 | -34 dB               |
| <b>DTF, Connector B</b>                 | -34 dB               |

## VSWR/Return Loss

| Frequency Band | VSWR  | Return Loss (dB) |
|----------------|-------|------------------|
| 698–960 MHz    | 1.101 | 26.4             |
| 1700–2200 MHz  | 1.101 | 26.4             |
| 2200–2700 MHz  | 1.135 | 24               |

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## Jumper Assembly Sample Label



## Environmental Specifications

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

## Packaging and Weights

**Included** Weatherproofing boot

## Regulatory Compliance/Certifications

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

## Included Products

- |          |   |
|----------|---|
| HSG-LDF4 | - HELIAX® SureGuard® Boot for 1/2 in jumpers to antennas or devices   |
| LDF4-50A | - LDF4-50A, HELIAX® Low Density Foam Coaxial Cable, corrugated copper, 1/2 in, black PE jacket Halogen free jacketing non-fire-retardant (General propose cable for outdoor use only) |

# HSG-LDF4



## HELIAX® SureGuard® Boot for 1/2 in jumpers to antennas or devices

- If there are threads along the entire device port length, the HELIAX® SureGuard weatherproofing solutions will only seal properly if the HSG-M29-ADPT adapter is installed on the device port

## Product Classification

|                      |                              |
|----------------------|------------------------------|
| <b>Product Type</b>  | Weatherproofing boot         |
| <b>Product Brand</b> | HELIAX®   SureGuard®         |
| <b>Ordering Note</b> | ANDREW® non-standard product |

## General Specifications

|                             |   |
|-----------------------------|---|
| <b>Application</b>          | Provides additional moisture seal for cable connections |
| <b>Applications per Kit</b> | One 1/2 in to antenna or device connection              |
| <b>Color</b>                | Black   |

## Dimensions

|   |                     |
|---|---------------------|
| <b>Width</b>                            | 55 mm   2.165 in    |
| <b>Length</b>                           | 99 mm   3.898 in    |
| <b>Cable Diameter for Seal, maximum</b> | 16.26 mm   0.64 in  |
| <b>Cable Diameter for Seal, minimum</b> | 15.59 mm   0.614 in |
| <b>Inner Diameter</b>                   | 14.35 mm   0.565 in |
| <b>Nominal Size</b>                     | 1/2 in              |

## Material Specifications

|                      |                 |
|----------------------|-----------------|
| <b>Material Type</b> | Silicone rubber |
|----------------------|-----------------|

## Environmental Specifications

|   |                                      |
|---|--------------------------------------|
| <b>Installation temperature</b>                   | -40 °C to +65 °C (-40 °F to +149 °F) |
| <b>Operating Temperature</b>                      | -40 °C to +85 °C (-40 °F to +185 °F) |
| <b>Storage Temperature</b>                        | -55 °C to +85 °C (-67 °F to +185 °F) |
| <b>UV Resistance Test Method</b>                  | ASTM G154-12a                        |
| <b>UV Resistance, minimum with no degradation</b> | ≥1000 hours                          |

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**Weather Resistance Test Method**

IEC 60068-2-11 | IEC 60529:2001, IP68

## Packaging and Weights

**Height, packed**

41 mm | 1.614 in

**Width, packed**

120 mm | 4.724 in

**Length, packed**

140 mm | 5.512 in

**Packaging quantity**

1

**Weight, gross**

27 g | 0.06 lb

# LDF4-50A



LDF4-50A, HELIAX® Low Density Foam Coaxial Cable, corrugated copper, 1/2 in, black PE jacket Halogen free jacketing non-fire-retardant (General propose cable for outdoor use only)

## Product Classification

|                       |                                   |
|-----------------------|-----------------------------------|
| <b>Product Type</b>   | Coaxial wireless cable            |
| <b>Product Brand</b>  | HELIAX®                           |
| <b>Product Series</b> | LDF4-50A                          |
| <b>Ordering Note</b>  | ANDREW® standard product (Global) |

## General Specifications

|                         |  |
|-------------------------|--|
| <b>Product Number</b>   | 520094002/00   SZ520094902/00                    |
| <b>Flexibility</b>      | Standard   |
| <b>Jacket Color</b>     | Black  |
| <b>Performance Note</b> | Attenuation values typical, guaranteed within 5% |

## Dimensions

|                                 |                      |
|---------------------------------|----------------------|
| <b>Diameter Over Dielectric</b> | 12.954 mm   0.51 in  |
| <b>Diameter Over Jacket</b>     | 15.875 mm   0.625 in |
| <b>Inner Conductor OD</b>       | 4.826 mm   0.19 in   |
| <b>Outer Conductor OD</b>       | 13.97 mm   0.55 in   |
| <b>Nominal Size</b>             | 1/2 in               |

## Electrical Specifications

|  |                               |
|--|-------------------------------|
| <b>Cable Impedance</b>                 | 50 ohm ±1 ohm                 |
| <b>Capacitance</b>                     | 75.8 pF/m   23.104 pF/ft      |
| <b>dc Resistance, Inner Conductor</b>  | 1.48 ohms/km   0.451 ohms/kft |
| <b>dc Resistance, Outer Conductor</b>  | 2.69 ohms/km   0.82 ohms/kft  |
| <b>dc Test Voltage</b>                 | 4000 V                        |
| <b>Inductance</b>                      | 0.19 µH/m   0.058 µH/ft       |
| <b>Insulation Resistance</b>           | 100000 MOhms-km               |
| <b>Jacket Spark Test Voltage (rms)</b> | 8000 V                        |

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|                                 |              |
|---------------------------------|--------------|
| <b>Operating Frequency Band</b> | 1 – 8800 MHz |
| <b>Peak Power</b>               | 40 kW        |
| <b>Velocity</b>                 | 88 %         |

## VSWR/Return Loss

| <b>Frequency Band</b> | <b>VSWR</b> | <b>Return Loss (dB)</b> |
|-----------------------|-------------|-------------------------|
| <b>680–800 MHz</b>    | 1.13        | 24.3                    |
| <b>800–960 MHz</b>    | 1.13        | 24.3                    |
| <b>1700–2200 MHz</b>  | 1.13        | 24.3                    |
| <b>2300–2700 MHz</b>  | 1.13        | 24.3                    |

## Attenuation

| <b>Frequency (MHz)</b> | <b>Attenuation (dB/100 m)</b> | <b>Attenuation (dB/100 ft)</b> | <b>Average Power (kW)</b> |
|------------------------|-------------------------------|--------------------------------|---------------------------|
| <b>1.0</b>             | 0.211                         | 0.064                          | 36.11                     |
| <b>1.5</b>             | 0.259                         | 0.079                          | 29.46                     |
| <b>2.0</b>             | 0.299                         | 0.091                          | 25.5                      |
| <b>10.0</b>            | 0.672                         | 0.205                          | 11.35                     |
| <b>20.0</b>            | 0.954                         | 0.291                          | 7.99                      |
| <b>30.0</b>            | 1.172                         | 0.357                          | 6.51                      |
| <b>50.0</b>            | 1.521                         | 0.463                          | 5.02                      |
| <b>85.0</b>            | 1.995                         | 0.608                          | 3.82                      |
| <b>88.0</b>            | 2.031                         | 0.619                          | 3.76                      |
| <b>100.0</b>           | 2.169                         | 0.661                          | 3.52                      |
| <b>108.0</b>           | 2.256                         | 0.688                          | 3.38                      |
| <b>150.0</b>           | 2.673                         | 0.815                          | 2.85                      |
| <b>174.0</b>           | 2.887                         | 0.88                           | 2.64                      |
| <b>200.0</b>           | 3.103                         | 0.946                          | 2.46                      |
| <b>204.0</b>           | 3.135                         | 0.956                          | 2.43                      |
| <b>300.0</b>           | 3.835                         | 1.169                          | 1.99                      |
| <b>400.0</b>           | 4.462                         | 1.36                           | 1.71                      |
| <b>450.0</b>           | 4.749                         | 1.447                          | 1.61                      |
| <b>460.0</b>           | 4.804                         | 1.464                          | 1.59                      |
| <b>500.0</b>           | 5.021                         | 1.53                           | 1.52                      |
| <b>512.0</b>           | 5.085                         | 1.55                           | 1.5                       |
| <b>600.0</b>           | 5.533                         | 1.686                          | 1.38                      |

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|               |        |       |      |
|---------------|--------|-------|------|
| <b>700.0</b>  | 6.009  | 1.831 | 1.27 |
| <b>800.0</b>  | 6.456  | 1.968 | 1.18 |
| <b>824.0</b>  | 6.56   | 1.999 | 1.16 |
| <b>894.0</b>  | 6.855  | 2.089 | 1.11 |
| <b>960.0</b>  | 7.124  | 2.171 | 1.07 |
| <b>1000.0</b> | 7.284  | 2.22  | 1.05 |
| <b>1218.0</b> | 8.11   | 2.472 | 0.94 |
| <b>1250.0</b> | 8.226  | 2.507 | 0.93 |
| <b>1500.0</b> | 9.093  | 2.771 | 0.84 |
| <b>1700.0</b> | 9.744  | 2.97  | 0.78 |
| <b>1794.0</b> | 10.039 | 3.06  | 0.76 |
| <b>1800.0</b> | 10.058 | 3.066 | 0.76 |
| <b>2000.0</b> | 10.666 | 3.251 | 0.72 |
| <b>2100.0</b> | 10.961 | 3.341 | 0.7  |
| <b>2200.0</b> | 11.251 | 3.429 | 0.68 |
| <b>2300.0</b> | 11.535 | 3.516 | 0.66 |
| <b>2500.0</b> | 12.09  | 3.685 | 0.63 |
| <b>2700.0</b> | 12.627 | 3.849 | 0.6  |
| <b>3000.0</b> | 13.407 | 4.086 | 0.57 |
| <b>3400.0</b> | 14.401 | 4.389 | 0.53 |
| <b>3600.0</b> | 14.882 | 4.536 | 0.51 |
| <b>3700.0</b> | 15.118 | 4.608 | 0.5  |
| <b>3800.0</b> | 15.353 | 4.679 | 0.5  |
| <b>3900.0</b> | 15.585 | 4.75  | 0.49 |
| <b>4000.0</b> | 15.815 | 4.82  | 0.48 |
| <b>4100.0</b> | 16.042 | 4.889 | 0.48 |
| <b>4200.0</b> | 16.268 | 4.958 | 0.47 |
| <b>4300.0</b> | 16.492 | 5.027 | 0.46 |
| <b>4400.0</b> | 16.714 | 5.094 | 0.46 |
| <b>4500.0</b> | 16.934 | 5.161 | 0.45 |
| <b>4600.0</b> | 17.153 | 5.228 | 0.44 |
| <b>4700.0</b> | 17.37  | 5.294 | 0.44 |
| <b>4800.0</b> | 17.585 | 5.36  | 0.43 |
| <b>4900.0</b> | 17.798 | 5.425 | 0.43 |
| <b>5000.0</b> | 18.01  | 5.489 | 0.42 |

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|               |        |       |      |
|---------------|--------|-------|------|
| <b>6000.0</b> | 20.055 | 6.113 | 0.38 |
| <b>8000.0</b> | 23.826 | 7.262 | 0.32 |
| <b>8800.0</b> | 25.244 | 7.694 | 0.3  |

## Material Specifications

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

## Mechanical Specifications

|  |                         |
|--|-------------------------|
| <b>Minimum Bend Radius, multiple Bends</b> | 127 mm   5 in           |
| <b>Minimum Bend Radius, single Bend</b>    | 50.8 mm   2 in          |
| <b>Number of Bends, minimum</b>            | 15                      |
| <b>Number of Bends, typical</b>            | 50                      |
| <b>Tensile Strength</b>                    | 113 kg   249.122 lb     |
| <b>Bending Moment</b>                      | 3.8 N-m   33.633 in lb  |
| <b>Flat Plate Crush Strength</b>           | 2 kg/mm   111.995 lb/in |

## Environmental Specifications

|   |                                      |
|---|--------------------------------------|
| <b>Installation temperature</b>                   | -40 °C to +60 °C (-40 °F to +140 °F) |
| <b>Operating Temperature</b>                      | -55 °C to +85 °C (-67 °F to +185 °F) |
| <b>Storage Temperature</b>                        | -70 °C to +85 °C (-94 °F to +185 °F) |
| <b>Attenuation, Ambient Temperature</b>           | 68 °F   20 °C                        |
| <b>Average Power, Ambient Temperature</b>         | 104 °F   40 °C                       |
| <b>Average Power, Inner Conductor Temperature</b> | 212 °F   100 °C                      |

## Packaging and Weights

|                     |                         |
|---------------------|-------------------------|
| <b>Cable weight</b> | 0.22 kg/m   0.148 lb/ft |
|---------------------|-------------------------|

## Regulatory Compliance/Certifications

| <b>Agency</b> | <b>Classification</b>  |
|---------------|--|
| CENELEC       | EN 50575 compliant, Declaration of Performance (DoP) available                 |
| CHINA-ROHS    | Below maximum concentration value  |
| ISO 9001:2015 | Designed, manufactured and/or distributed under this quality management system |



# LDF4-50A

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|            |  |
|------------|--|
| REACH-SVHC | Compliant as per SVHC revision on <a href="http://www.andrew.com/ProductCompliance">www.andrew.com/ProductCompliance</a> |
| ROHS       | Compliant  |
| UK-ROHS    | Compliant  |

