

# L2-PSMSM

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## Base Product



## Product Classification

<b>Product Type</b>	Wireless transmission cable assembly
<b>Product Series</b>	LDF2-50

## General Specifications

<b>Body Style, Connector A</b>	Straight
<b>Body Style, Connector B</b>	Straight
<b>Interface, Connector A</b>	SMA Male
<b>Interface, Connector B</b>	SMA Male
<b>Specification Sheet Revision Level</b>	A
<b>Variable Length</b>	For custom lengths contact 828-324-2200 or 1-800-982-1708 (toll free), or your local CommScope representative

## Dimensions

<b>Length</b>	0 m   0 ft
<b>Nominal Size</b>	3/8 in

## VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
700–3000 MHz	1.43	15.04

## Jumper Assembly Sample Label

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## 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
- L2TSM-PL – SMA 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

<b>Product Type</b>	Coaxial wireless cable
<b>Product Brand</b>	HELIAX®   SureFlex®
<b>Product Series</b>	LDF2-50

## General Specifications

<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>	8.636 mm   0.34 in
<b>Diameter Over Jacket</b>	11.176 mm   0.44 in
<b>Inner Conductor OD</b>	3.048 mm   0.12 in
<b>Outer Conductor OD</b>	9.652 mm   0.38 in
<b>Nominal Size</b>	3/8 in

## Electrical Specifications

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

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<b>Jacket Spark Test Voltage (rms)</b>	5000 V
<b>Operating Frequency Band</b>	1 – 13000 MHz
<b>Peak Power</b>	15.6 kW
<b>Velocity</b>	85 %

## 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>	95.25 mm   3.75 in
<b>Minimum Bend Radius, single Bend</b>	40.64 mm   1.6 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>	1.9 N-m   16.816 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>	0.12 kg/m   0.081 lb/ft
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## Regulatory Compliance/Certifications

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

# L2TSM-PL

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



## Product Classification

<b>Product Type</b>	Wireless and radiating connector
<b>Product Brand</b>	HELIAX®
<b>Product Series</b>	LDF2-50

## General Specifications

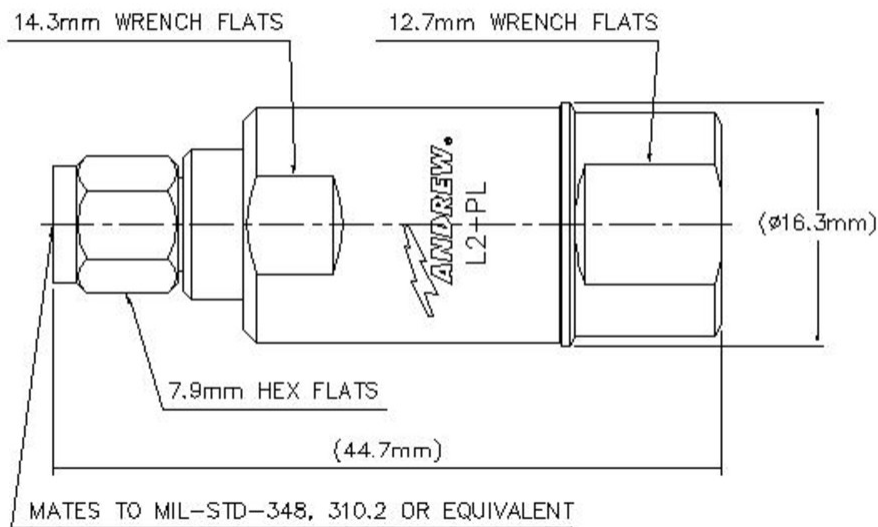
<b>Body Style</b>	Straight
<b>Cable Family</b>	LDF2-50
<b>Inner Contact Attachment Method</b>	Captivated
<b>Inner Contact Plating</b>	Gold
<b>Interface</b>	SMA Male
<b>Mounting Angle</b>	Straight
<b>Outer Contact Attachment Method</b>	Ring-flare
<b>Outer Contact Plating</b>	Trimetal
<b>Pressurizable</b>	No

## Dimensions

<b>Height</b>	16.26 mm   0.64 in
<b>Width</b>	16.26 mm   0.64 in
<b>Length</b>	44.7 mm   1.76 in
<b>Diameter</b>	16.26 mm   0.64 in
<b>Nominal Size</b>	3/8 in

## Outline Drawing

# L2TSM-PL



## Electrical Specifications

<b>Insertion Loss Coefficient, typical</b>	0.05
<b>Average Power at Frequency</b>	0.7 kW @ 900 MHz
<b>Cable Impedance</b>	50 ohm
<b>Connector Impedance</b>	50 ohm
<b>dc Test Voltage</b>	1000 V
<b>Inner Contact Resistance, maximum</b>	3 mOhm
<b>Insulation Resistance, minimum</b>	5000 MOhm
<b>Operating Frequency Band</b>	0 – 13500 MHz
<b>Outer Contact Resistance, maximum</b>	2.5 mOhm
<b>Peak Power, maximum</b>	5 kW
<b>RF Operating Voltage, maximum (vrms)</b>	500 V
<b>Shielding Effectiveness</b>	-110 dB

## VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
0–960 MHz	1.02	40.09
960–2200 MHz	1.052	31.92
2200–2700 MHz	1.058	31

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2700–4000 MHz	1.065	30.04
4000–6000 MHz	1.065	30.04
6000–8000 MHz	1.052	31.92
8000–10000 MHz	1.058	31
10000–12000 MHz	1.119	25.01
12000–13500 MHz	1.222	20.01

## Mechanical Specifications

<b>Attachment Durability</b>	25 cycles
<b>Connector Retention Tensile Force</b>	671.68 N   151 lbf
<b>Connector Retention Torque</b>	2.7 N-m   23.897 in lb
<b>Coupling Nut Proof Torque</b>	1.7 N-m   15.046 in lb
<b>Coupling Nut Retention Force</b>	266.98 N   60.02 lbf
<b>Coupling Nut Retention Force Method</b>	MIL-C-39012C-3.25, 4.6.22
<b>Insertion Force</b>	22.02 N   4.95 lbf
<b>Insertion Force Method</b>	IEC 61169-1:15.2.4
<b>Interface Durability</b>	500 cycles
<b>Interface Durability Method</b>	IEC 61169-15:9.5
<b>Mechanical Shock Test Method</b>	IEC 60068-2-27

## Environmental Specifications

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

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## Packaging and Weights

**Weight, net** 29.43 g | 0.065 lb

## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
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 <a href="http://www.commscope.com/ProductCompliance">www.commscope.com/ProductCompliance</a>
ROHS	Compliant
UK-ROHS	Compliant



## \* Footnotes

**Insertion Loss Coefficient, typical**  $0.05\sqrt{\text{freq (GHz)}}$  (not applicable for elliptical waveguide)

**Immersion Depth** Immersion at specified depth for 24 hours



# LDF2-50

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



## Product Classification

<b>Product Type</b>	Coaxial wireless cable
<b>Product Brand</b>	HELIAX®   SureFlex®
<b>Product Series</b>	LDF2-50

## General Specifications

<b>Product Number</b>	520098202/00   SZ520098202/00
<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>	8.636 mm   0.34 in
<b>Diameter Over Jacket</b>	11.176 mm   0.44 in
<b>Inner Conductor OD</b>	3.124 mm   0.123 in
<b>Outer Conductor OD</b>	9.652 mm   0.38 in
<b>Nominal Size</b>	3/8 in

## Electrical Specifications

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

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

## Material Specifications

<b>Dielectric Material</b>	Foam PE
<b>Jacket Material</b>	PE
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## Packaging and Weights

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## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
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