L2-PSMSM-20M-HF

LDF2-50 Jumper with interface types SMA Male and SMA Male, 20M

Product Classification

Product Type	Wireless transmission cable assembly
Product Series	LDF2-50

General Specifications

Body Style, Connector A	Straight
Body Style, Connector B	Straight
Interface, Connector A	SMA Male
Interface, Connector B	SMA Male
Specification Sheet Revision Level	A

Dimensions

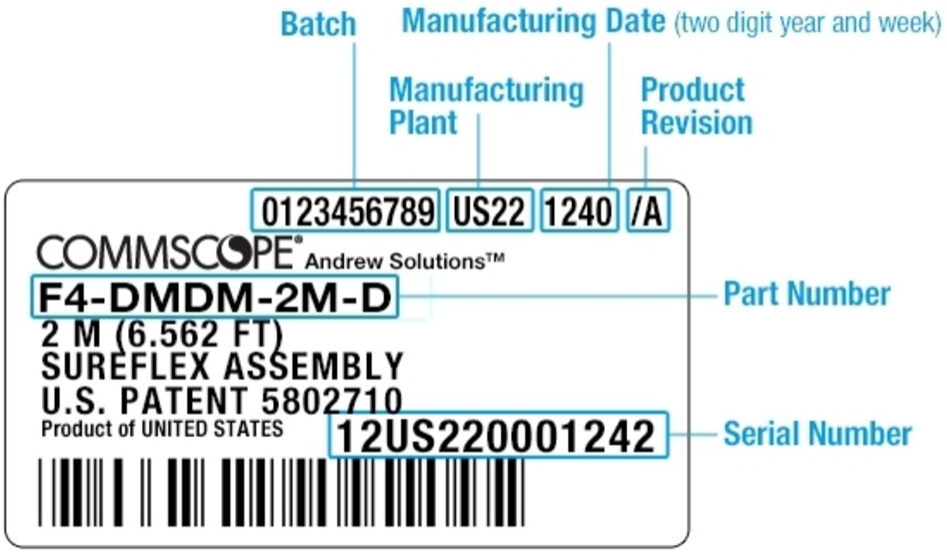
Length	20 m | 65.617 ft
Nominal Size	3/8 in

VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
45–13000 MHz	1.58	13

Jumper Assembly Sample Label

L2-PSMSM-20M-HF



Environmental Specifications

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

Included Products

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

L2TSM-PL

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

Product Classification

Product Type	Wireless and radiating connector
Product Brand	HELIAX®

General Specifications

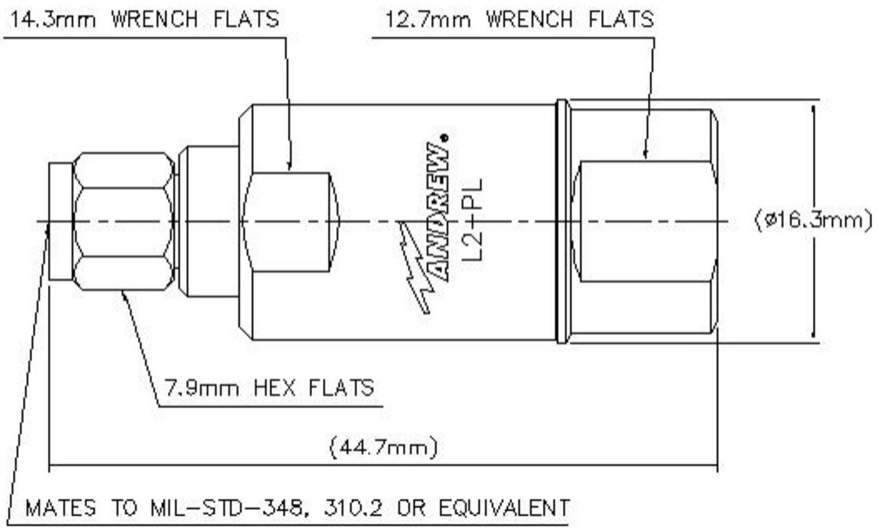
Body Style	Straight
Cable Family	LDF2-50
Inner Contact Attachment Method	Captivated
Inner Contact Plating	Gold
Interface	SMA Male
Mounting Angle	Straight
Outer Contact Attachment Method	Ring-flare
Outer Contact Plating	Trimetal
Pressurizable	No

Dimensions

Height	16.26 mm | 0.64 in
Width	16.26 mm | 0.64 in
Length	44.7 mm | 1.76 in
Diameter	16.26 mm | 0.64 in
Nominal Size	3/8 in

Outline Drawing

L2TSM-PL



Electrical Specifications

Insertion Loss, typical	0.05 dB
Average Power at Frequency	0.7 kW @ 900 MHz
Cable Impedance	50 ohm
Connector Impedance	50 ohm
dc Test Voltage	1000 V
Inner Contact Resistance, maximum	3 mOhm
Insulation Resistance, minimum	5000 MOhm
Operating Frequency Band	0 – 13500 MHz
Outer Contact Resistance, maximum	2.5 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	1.03	40
960–2200 MHz	1.06	32
2200–2700 MHz	1.06	31

2700–4000 MHz	1.07	30
4000–6000 MHz	1.07	30
6000–8000 MHz	1.06	32
8000–10000 MHz	1.06	31
10000–12000 MHz	1.12	25
12000–13500 MHz	1.23	20

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	266.98 N | 60.02 lbf
Coupling Nut Retention Force Method	MIL-C-39012C-3.25, 4.6.22
Insertion Force	22.02 N | 4.95 lbf
Insertion Force Method	IEC 61169-1:15.2.4
Interface Durability	500 cycles
Interface Durability Method	IEC 61169-15:9.5
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

Packaging and Weights

Weight, net	29.43 g | 0.065 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
REACH-SVHC	Compliant as per SVHC revision on www.commscope.com/ProductCompliance
ROHS	Compliant

* Footnotes

Insertion Loss, typical	0.05v¯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

Flexibility	Standard
Jacket Color	Black

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
Jacket Spark Test Voltage (rms)	5000 V
Operating Frequency Band	1 – 13000 MHz

LDF2-50

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
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

Dielectric Material	Foam PE
Jacket Material	PE

LDF2-50

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