

L2-PDMDFPM-2F5



LDF2-50 Jumper with interface types 7-16 DIN Male and 7-16 DIN Female Panel Mount, 0.76 m

OBSOLETE

This product was discontinued on: August 15, 2017

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	Panel mount
Interface, Connector A	7-16 DIN Male
Interface, Connector B	7-16 DIN Female
Specification Sheet Revision Level	A

Dimensions

Length	0.76 m 2.493 ft
Nominal Size	3/8 in

Electrical Specifications

DTF, Connector A	-32 dB
DTF, Connector B	-32 dB

VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
700–3000 MHz	1.222	20.01

Jumper Assembly Sample Label

L2-PDMDFPM-2F5



Environmental Specifications

Immersion Test Method

Meets IEC 60529:2001, IP68 in mated condition

Regulatory Compliance/Certifications

Agency

ISO 9001:2015

Classification

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 |
| L2TDM-PL | - | 7-16 DIN Male Positive Lock for 3/8 in LDF2-50 cable |
| L2TKM-PL | - | 4.1/9.5 Mini-Din Male connector with 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
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
1218.0	12.874	3.924	0.6
1250.0	13.059	3.98	0.59
1500.0	14.446	4.403	0.53

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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

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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
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Regulatory Compliance/Certifications

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



L2TDM-PL



7-16 DIN 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

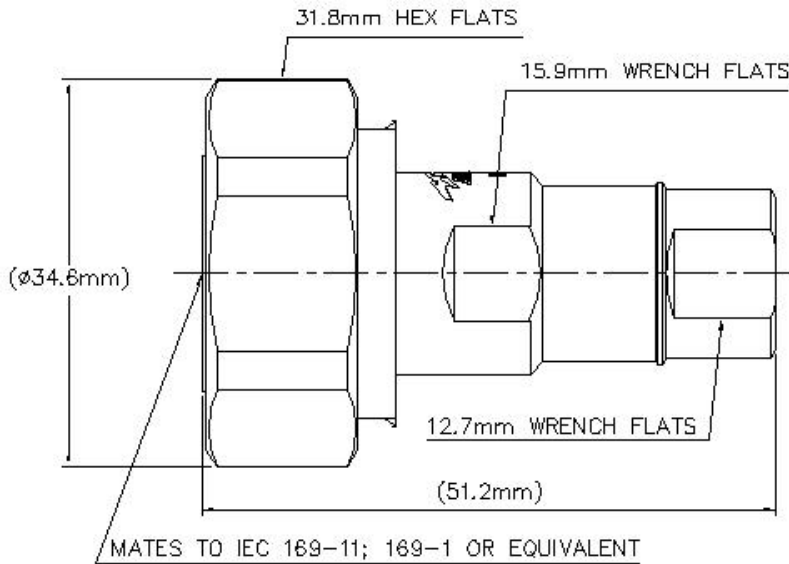
Body Style	Straight
Cable Family	LDF2-50
Inner Contact Attachment Method	Captivated
Inner Contact Plating	Silver
Interface	7-16 DIN Male
Mounting Angle	Straight
Outer Contact Attachment Method	Ring-flare
Outer Contact Plating	Trimetal
Pressurizable	No

Dimensions

Height	34.54 mm 1.36 in
Width	34.54 mm 1.36 in
Length	51.31 mm 2.02 in
Diameter	34.54 mm 1.36 in
Nominal Size	3/8 in

Outline Drawing

L2TDM-PL



Electrical Specifications

3rd Order IMD at Frequency	-107 dBm @ 910 MHz
3rd Order IMD Test Method	Two +43 dBm carriers
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	2500 V
Inner Contact Resistance, maximum	0.4 mOhm
Insulation Resistance, minimum	10000 MOhm
Operating Frequency Band	0 – 10000 MHz
Outer Contact Resistance, maximum	1.5 mOhm
Peak Power, maximum	15.6 kW
RF Operating Voltage, maximum (vrms)	894 V
Shielding Effectiveness	-110 dB

VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
0-960 MHz	1.027	37.51

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960–2200 MHz	1.058	31
2200–2700 MHz	1.065	30.04
2700–4000 MHz	1.083	27.99
4000–6000 MHz	1.089	27.41
6000–8000 MHz	1.089	27.41
8000–10000 MHz	1.36	16.5

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	35 N-m 309.776 in lb
Coupling Nut Retention Force	1000 N 224.81 lbf
Coupling Nut Retention Force Method	MIL-C-39012C-3.25, 4.6.22
Insertion Force	199.99 N 44.96 lbf
Insertion Force Method	IEC 61169-1:15.2.4
Interface Durability	500 cycles
Interface Durability Method	IEC 61169-4:17
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

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Packaging and Weights

Weight, net

102.12 g | 0.225 lb

Regulatory Compliance/Certifications

Agency

ISO 9001:2015

Classification

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



* Footnotes

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

Immersion Depth Immersion at specified depth for 24 hours

L2TKM-PL



4.1/9.5 Mini-Din Male connector with LDF2-50 cable

Product Classification

Product Type	Wireless and radiating connector
Product Brand	HELIAX®

General Specifications

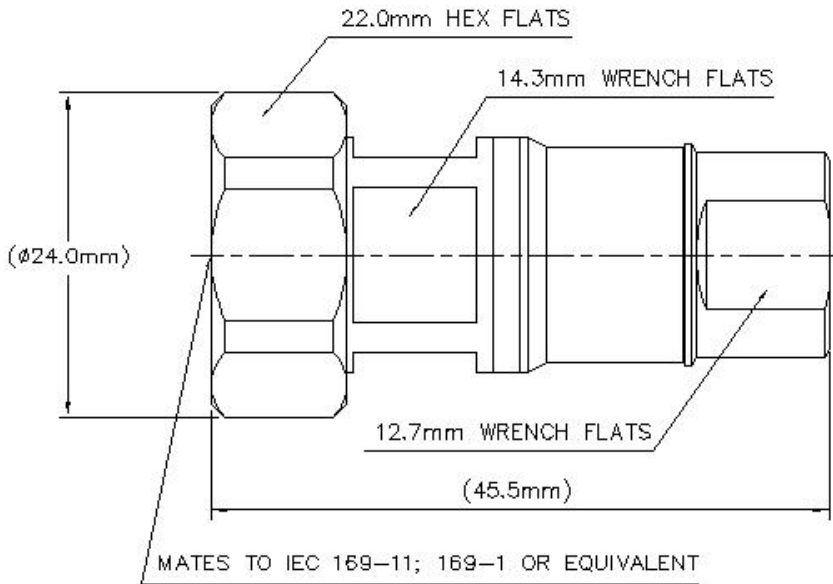
Body Style	Straight
Cable Family	LDF2-50
Inner Contact Attachment Method	Captivated
Inner Contact Plating	Silver
Interface	4.1-9.5 DIN Male
Mounting Angle	Straight
Outer Contact Attachment Method	Ring-flare
Outer Contact Plating	Trimetal

Dimensions

Length	45.47 mm 1.79 in
Diameter	23.88 mm 0.94 in
Nominal Size	3/8 in

L2TKM-PL

Outline Drawing



Electrical Specifications

3rd Order IMD at Frequency	-112 dBm @ 910 MHz
3rd Order IMD Test Method	Two +43 dBm carriers
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	2500 V
Inner Contact Resistance, maximum	0.8 mOhm
Insulation Resistance, minimum	5000 MOhm
Operating Frequency Band	0 – 6000 MHz
Outer Contact Resistance, maximum	0.2 mOhm
Peak Power, maximum	15.6 kW
Shielding Effectiveness	-110 dB

VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
0-2000 MHz	1.065	30.04

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2000–3000 MHz	1.083	27.99
3000–6000 MHz	1.11	26.4

Mechanical Specifications

Attachment Durability	25 cycles
Connector Retention Tensile Force	671.68 N 151 lbf
Connector Retention Torque	5.42 N-m 47.971 in lb
Coupling Nut Proof Torque	50 N-m 442.537 in lb
Coupling Nut Retention Force	549.98 N 123.64 lbf
Coupling Nut Retention Force Method	MIL-C-39012C-3.25, 4.6.22
Insertion Force	80.07 N 18 lbf
Insertion Force Method	IEC 61169-1:15.2.4
Interface Durability	500 cycles
Mechanical Shock Test Method	IEC 60068-2-27

Environmental Specifications

Operating Temperature	-55 °C to +85 °C (-67 °F to +185 °F)
Storage Temperature	-55 °C to +85 °C (-67 °F to +185 °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	51.5 g 0.114 lb
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Regulatory Compliance/Certifications

Agency	Classification
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L2TKM-PL

ISO 9001:2015

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



* 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
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 %

LDF2-50

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

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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
Inner Conductor Material	Copper-clad aluminum wire

LDF2-50

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

