

# HELIAX® Coaxial Cables

ANDREW® LDF2-50 HELIAX®

## LDF2-50

### Cable Ordering Information

Description	Type No.
<b>Standard Cable</b>	
3/8" Standard Cable, Standard Jacket	<b>LDF2-50</b>
<b>Fire Retardant Cables</b>	
3/8" Fire Retardant Jacket (CATVX)	<b>LDF2RN-50</b>
3/8" Fire Retardant Jacket (CATVR)	<b>LDF2RN-50</b>
<b>Low VSWR and Specialized Cables</b>	
3/8" Low VSWR, specify operating band	<b>LDF2P-50-(**)</b>
Phase Stabilized and Phase Measured Cable	See page 585

\*\* Insert suffix number from "Low VSWR Specifications" table.

### Characteristics

<b>Electrical</b>	
Impedance, ohms	50 ± 1
Maximum Frequency, GHz	13.5
Velocity, percent	88
Peak Power Rating, kW	15.6
dc Resistance, ohms/1000 ft (1000 m)	
Inner	1.06 (3.48)
Outer	0.87 (2.85)
dc Breakdown, volts	2500
Jacket Spark, volts RMS	5000
Capacitance, pF/ft (m)	23.0 (75.5)
Inductance, µH/ft (m)	0.058 (0.19)
<b>Mechanical</b>	
Outer Conductor	Copper
Inner Conductor	Copper-Clad Aluminum
Diameter over Jacket, in (mm)	0.44 (11)
Diameter over Copper Outer Conductor, in (mm)	0.38 (9.7)
Diameter Inner Conductor, in (mm)	0.122 (3.1)
Minimum Bending Radius, in (mm)	3.75 (95)
Number of Bends, minimum (typical)	15 (60)
Bending Moment, lb-ft (N•m)	1.4 (1.9)
Cable Weight, lb/ft (kg/m)	0.08 (0.12)
Tensile Strength, lb (kg)	250 (113)
Flat Plate Crush Strength, lb/in (kg/mm)	110 (2.0)

### Attenuation and Average Power

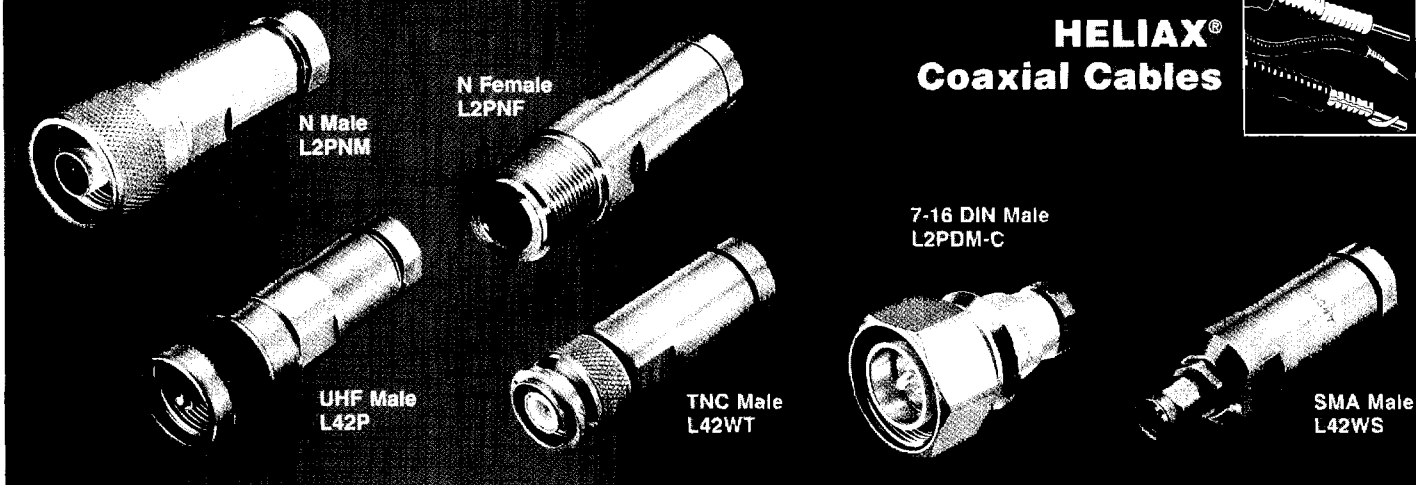
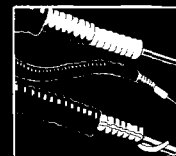
Frequency MHz	Attenuation dB/100 ft	Attenuation dB/100m	Average Power kW
0.5	0.072	0.236	15.6
1	0.102	0.335	15.6
1.5	0.125	0.410	15.6
2	0.145	0.476	15.6
10	0.325	1.07	7.23
20	0.462	1.52	5.09
30	0.567	1.86	4.14
50	0.736	2.41	3.19
88	0.984	3.23	2.38
100	1.05	3.44	2.23
108	1.09	3.59	2.15
150	1.30	4.27	1.81
174	1.40	4.59	1.67
200	1.50	4.92	1.56
300	1.86	6.09	1.26
400	2.16	7.09	1.08
450	2.30	7.56	1.02
500	2.44	8.00	0.963
512	2.47	8.11	0.951
600	2.69	8.84	0.874
700	2.93	9.61	0.804
800	3.13	10.3	0.748
824	3.19	10.5	0.736
894	3.34	11.0	0.704
960	3.47	11.4	0.678
1000	3.55	11.6	0.663
1250	4.01	13.2	0.586
1500	4.43	14.6	0.530
1700	4.75	15.6	0.494
2000	5.21	17.1	0.451
2300	5.63	18.4	0.417
3000	6.56	21.5	0.358
4000	7.74	25.4	0.303
5000	8.84	29.0	0.266
6000	9.85	32.3	0.239
8000	11.8	38.6	0.200
10000	13.5	44.3	0.175
12000	15.2	49.8	0.156
13000	16.0	52.5	0.148
13500	16.4	53.7	0.145

#### Standard Conditions:

For Attenuation, VSWR 1.0, ambient temperature 24°C (75°F), atmospheric pressure, dry air.

For average power, VSWR 1.0 ambient temperature 40°C (104°F), inner conductor temperature 100°C (212°F), no solar loading.

# HELIAX® Coaxial Cables



## Connectors

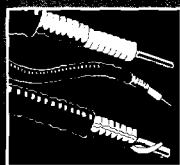
Interface	Description	Type Number	Previous Type Number	Inner Contact Attachment	Outer Contact Attachment	Plating Code	Max. Length in (mm)	Max. Dia. in (mm)
N Male		<b>L2NM</b>	L42W	Solder	Self-Flare	BS	2.1 (53)	0.81 (20.6)
N Male	Hex Head	<b>L2NM-H</b>		Solder	Self-Flare	BS	2.1 (53)	0.94 (23.9)
N Male		<b>L2PNM†</b>	L42PW	Solder	Self-Flare	SG	2.1 (53)	0.81 (20.6)
N Male	Hex Head	<b>L2PNM-H</b>		Solder	Self-Flare	SG	2.1 (53)	0.94 (23.9)
N Female		<b>L2NF</b>	L42N	Solder	Self-Flare	BS	2.4 (61)	0.63 (16.0)
N Female		<b>L2PNF</b>	L42PN	Solder	Self-Flare	SG	2.4 (61)	0.63 (16.0)
N Female	Bulk Head	<b>L2PNF-BH</b>		Solder	Self-Flare	SG	2.4 (61)	0.88 (22.4)
4.1/9.5 DIN	Indoor Use	<b>L2PKM-IC</b>	L42KM	Captivated	Self-Flare	SS	1.9 (48)	0.95 (24.1)
4.1/9.5 DIN	Indoor Use	<b>L2PKM-I</b>	L42KMS	Solder	Self-Flare	SS	1.9 (48)	0.95 (24.1)
4.1/9.5 DIN	Outdoor Use	<b>L2PKM-C</b>	L42KME	Captivated	Self-Flare	SS	1.9 (48)	0.95 (24.1)
4.1/9.5 DIN	Outdoor Use	<b>L2PKM</b>	L42KMSE	Solder	Self-Flare	SS	1.9 (48)	0.95 (24.1)
4.1/9.5 DIN	Right Angle	<b>L2PKR-IC</b>	L42KM-RA	Captivated	Self-Flare	SS	2.0/1.5 (50/38)	0.95 (24.1)
4.1/9.5 DIN	Right Angle	<b>L2PKR-C</b>	L42KME-RA	Captivated	Self-Flare	SS	2.0/1.5 (50/38)	0.95 (24.1)
7-16 DIN Male		<b>L2PDM-C</b>	L42ADM	Captivated	Self-Flare	SS	1.9 (48)	1.1 (27.9)
7-16 DIN Male		<b>L2PDF-C</b>	L42ADF	Captivated	Self-Flare	SS	1.9 (48)	1.4 (35.6)
7-16 DIN Male	Panel Mount	<b>L2PDF-PMC</b>	L42ADF-PM	Captivated	Self-Flare	SS	1.9 (48)	1.25 (31.8)
UHF Male		<b>L42P</b>		Solder	Self-Flare	BB	2.3 (58)	0.68 (17.3)
UHF Female		<b>L42U</b>		Solder	Self-Flare	BB	2.3 (58)	0.91 (23.1)
SMA Male		<b>L42WS</b>		Solder	Self-Flare	BG	2.2 (56)	0.68 (17.3)
TNC Male		<b>L42WT</b>		Solder	Self-Flare	BB	2.1 (53)	0.68 (17.3)
TNC Male		<b>L42EWT†</b>		Solder	Self-Flare	NG	2.1 (53)	0.68 (17.3)
TNC Female		<b>L42NT</b>		Solder	Self-Flare	BS	1.9 (48)	0.68 (17.3)
TNC Female		<b>L42ENT</b>		Solder	Self-Flare	NG	1.9 (48)	0.68 (17.3)

† See page 570 for bulk packs.

**Plating Codes:** BB - Brass Body and Pin, BS - Brass Body and Silver Plated Pin, NG - Nickel Plated Body and Gold Plated Pin, SG - Silver Plated Body and Gold Plated Pin, SS - Silver Plated Body and Pin

## Connector Accessories

	Type Number
Connector Pin-Paks, five replacement pins	
For L2NM, L2NM-H	<b>48335-3</b>
For L2PNM, L2PNM-H	<b>48335-4</b>
Connector Reattachment Kit	<b>34767A-38</b>
Bulkhead Adapter, for N or UHF Females	<b>26016-2</b>
End Terminal Adapter, use with N Male connector	<b>13074A</b>



# HELIAX<sup>®</sup> Coaxial Cables

## Low VSWR Specifications, Type LDF2P-50-( )

Frequency Band, GHz	Type No.	Using Connector Type No.**	Assembly VSWR, Maximum (R.L., dB)	
			to 10 ft (3 m)	10-20 ft (3-6 m)
1.7 - 2.3	LDF2P-50-5	N Male: <b>L2PNM</b>	1.10 (26.5)	1.10 (26.5)
		N Female: <b>L2PNF</b>	1.10 (26.5)	1.15 (23.1)
		TNC Male: <b>L42EWT</b>	1.10 (26.5)	1.15 (23.1)
Up to 2.3 GHz*	LDF2P-50-1	N Male: <b>L2PNM</b>	1.15 (23.1)	1.20 (20.8)
		N Female: <b>L2PNF</b>	1.15 (23.1)	1.25 (19.9)
		TNC Male: <b>L42EWT</b>	1.20 (20.8)	1.30 (17.7)
Up to 4.2 GHz*	LDF2P-50-2	N Male: <b>L2PNM</b>	1.20 (20.8)	1.35 (16.6)
		N Female: <b>L2PNF</b>	1.35 (16.6)	1.45 (14.7)
Up to 8.5 GHz*	LDF2P-50-3	N Male: <b>L2PNM</b>	1.25 (19.9)	1.35 (16.6)
Up to 13.5 GHz*	LDF2P-50-4	N Male: <b>L2PNM</b>	1.30 (17.7)	1.35 (16.6)

\* Specify operating band. \*\* Connectors ordered separately.

VSWR values are guaranteed for factory fit assemblies and are typical for field cut lengths. If two different connector interfaces are selected, the higher VSWR value is guaranteed.

## Accessories -

Photos and descriptions on pages 544-572

Description	Type No.	Description	Type No.
<b>Hangers and Adapters -</b> for more hangers and adapters see pages 547-557.		<b>Grounding and Surge Protection -</b> for more information, see pages 559-564.	
<b>Insulated Hangers and Adapters</b>		<b>Grounding Kit -</b> factory attached, one-hole lug, 24 in (610 mm) lead	<b>223158</b>
<b>Insulated Hanger</b> , single, for insulated towers. Standard tower configuration spacing is 3-4 feet (1-1.2 m). Recommended maximum spacing for outdoor installation is 2 ft (0.61 m) at 125 mph (200 km/h) wind, 1/2" (13 mm) radial ice. For different wind and ice loading spacing recommendations, refer to Cable Hanger Spacing, page 547.	<b>11662-3</b>	<b>Arrestor Plus<sup>®</sup> T-Series Lightning Surge Protector.</b> Connectors on each end (universal version). Non-directional #,* <i>Interface and frequency band information.</i> <i>See page 563 for details.</i>	<b>APT-#-*</b>
<b>Angle Adapter</b> , for insulated hanger	<b>40430-1</b>	<b>Gas Tube Surge Arrestor.</b> Connectors on each end (universal version). Directional, dc pass capability #,* <i>Interface and frequency band information.</i> <i>See page 564 for details.</i>	<b>SA-#-*</b>
<b>Stainless Steel Wraplock</b> , for round tower members	<b>12395-1</b>	<b>Weatherproofing -</b> for more information, see page 565.	
<b>Nylon Cable Tie Kit</b> of 50. Recommended maximum spacing for outdoor installations is 3 ft (1 m)	<b>40417</b>	<b>Cold Shrink Weatherproofing Kit</b> 3/8" Coax-Type N to 3/8" Coax-Type N 3/8" Coax-Type N to Antenna Output	<b>241474-3</b> <b>241548-3</b>
<b>Nylon Cable Tie Kit</b> in Plastic Box. 100 each, 4, 5.5, and 7.5 inch (101,140, and 190 mm) ties. Recommended maximum spacing for outdoor installations is 3 ft (1 m)	<b>CT-K350</b>	<b>Connector/Splice Weatherproofing Kit</b>	<b>221213</b>
<b>Velcro Cable Ties.</b> Black, 8 inch. For indoor use only		<b>Installer Pax<sup>™</sup>.</b> Bulk packs are available for some hangers, adapters, grounding kits and cold shrink weatherproofing kits. See page 570.	
Kit of 10	<b>VCT8-10</b>		
Kit of 50	<b>VCT8-50</b>		