

HELIAX® Coaxial Cables

ANDREW® LDF2-50 HELIAX®

LDF2-50

Cable Ordering Information

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

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

Characteristics

Electrical	
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)
Mechanical	
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

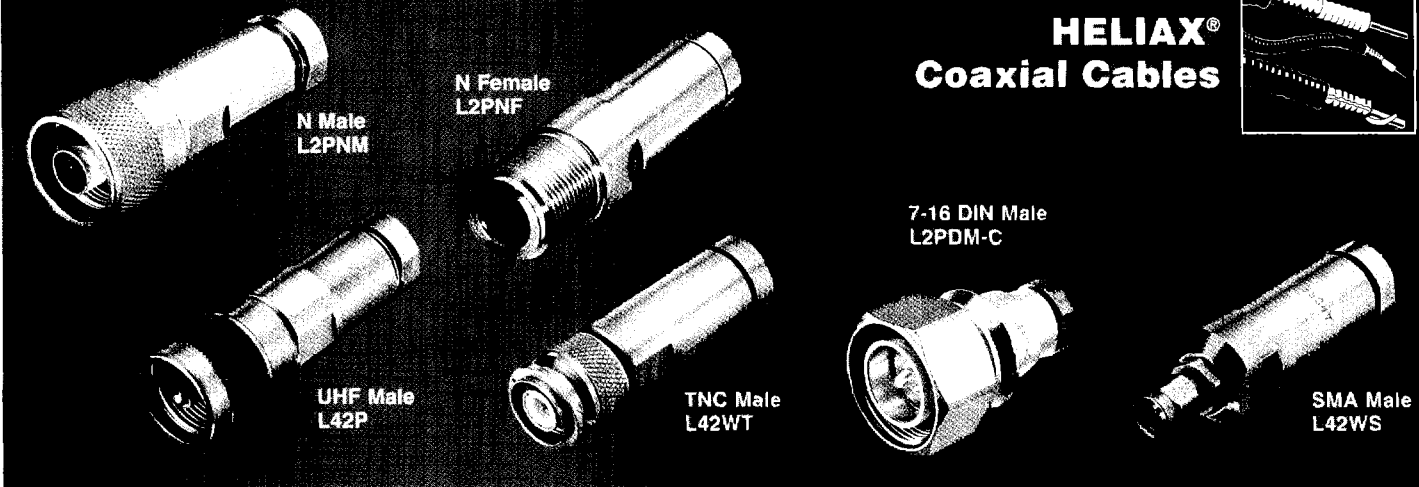
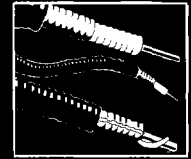
Frequency MHz	Attenuation dB/100 ft	Attenuation dB/100m	Average Power kW
0.5	0.072	0.236	15.6
1	0.102	0.335	15.6
1.5	0.125	0.410	15.6
2	0.145	0.476	15.6
10	0.325	1.07	7.23
20	0.462	1.52	5.09
30	0.567	1.86	4.14
50	0.736	2.41	3.19
88	0.984	3.23	2.38
100	1.05	3.44	2.23
108	1.09	3.59	2.15
150	1.30	4.27	1.81
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.

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Connectors

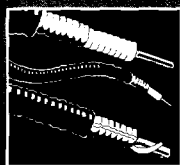
Interface	Description	Type Number	Previous Type Number	Inner Contact Attachment	Outer Contact Attachment	Plating Code	Max. Length in (mm)	Max. Dia. in (mm)
N Male		L2NM	L42W	Solder	Self-Flare	BS	2.1 (53)	0.81 (20.6)
N Male	Hex Head	L2NM-H		Solder	Self-Flare	BS	2.1 (53)	0.94 (23.9)
N Male		L2PNM†	L42PW	Solder	Self-Flare	SG	2.1 (53)	0.81 (20.6)
N Male	Hex Head	L2PNM-H		Solder	Self-Flare	SG	2.1 (53)	0.94 (23.9)
N Female		L2NF	L42N	Solder	Self-Flare	BS	2.4 (61)	0.63 (16.0)
N Female		L2PNF	L42PN	Solder	Self-Flare	SG	2.4 (61)	0.63 (16.0)
N Female	Bulk Head	L2PNF-BH		Solder	Self-Flare	SG	2.4 (61)	0.88 (22.4)
4.1/9.5 DIN	Indoor Use	L2PKM-IC	L42KM	Captivated	Self-Flare	SS	1.9 (48)	0.95 (24.1)
4.1/9.5 DIN	Indoor Use	L2PKM-I	L42KMS	Solder	Self-Flare	SS	1.9 (48)	0.95 (24.1)
4.1/9.5 DIN	Outdoor Use	L2PKM-C	L42KME	Captivated	Self-Flare	SS	1.9 (48)	0.95 (24.1)
4.1/9.5 DIN	Outdoor Use	L2PKM	L42KMSE	Solder	Self-Flare	SS	1.9 (48)	0.95 (24.1)
4.1/9.5 DIN	Right Angle	L2PKR-IC	L42KM-RA	Captivated	Self-Flare	SS	2.0/1.5 (50/38)	0.95 (24.1)
4.1/9.5 DIN	Right Angle	L2PKR-C	L42KME-RA	Captivated	Self-Flare	SS	2.0/1.5 (50/38)	0.95 (24.1)
7-16 DIN Male		L2PDM-C	L42ADM	Captivated	Self-Flare	SS	1.9 (48)	1.1 (27.9)
7-16 DIN Male		L2PDF-C	L42ADF	Captivated	Self-Flare	SS	1.9 (48)	1.4 (35.6)
7-16 DIN Male	Panel Mount	L2PDF-PMC	L42ADF-PM	Captivated	Self-Flare	SS	1.9 (48)	1.25 (31.8)
UHF Male		L42P		Solder	Self-Flare	BB	2.3 (58)	0.68 (17.3)
UHF Female		L42U		Solder	Self-Flare	BB	2.3 (58)	0.91 (23.1)
SMA Male		L42WS		Solder	Self-Flare	BG	2.2 (56)	0.68 (17.3)
TNC Male		L42WT		Solder	Self-Flare	BB	2.1 (53)	0.68 (17.3)
TNC Male		L42EWT†		Solder	Self-Flare	NG	2.1 (53)	0.68 (17.3)
TNC Female		L42NT		Solder	Self-Flare	BS	1.9 (48)	0.68 (17.3)
TNC Female		L42ENT		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	48335-3
For L2PNM, L2PNM-H	48335-4
Connector Reattachment Kit	34767A-38
Bulkhead Adapter, for N or UHF Females	26016-2
End Terminal Adapter, use with N Male connector	13074A



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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: L2PNM	1.10 (26.5)	1.10 (26.5)
		N Female: L2PNF	1.10 (26.5)	1.15 (23.1)
		TNC Male: L42EWT	1.10 (26.5)	1.15 (23.1)
Up to 2.3 GHz*	LDF2P-50-1	N Male: L2PNM	1.15 (23.1)	1.20 (20.8)
		N Female: L2PNF	1.15 (23.1)	1.25 (19.9)
		TNC Male: L42EWT	1.20 (20.8)	1.30 (17.7)
Up to 4.2 GHz*	LDF2P-50-2	N Male: L2PNM	1.20 (20.8)	1.35 (16.6)
		N Female: L2PNF	1.35 (16.6)	1.45 (14.7)
Up to 8.5 GHz*	LDF2P-50-3	N Male: L2PNM	1.25 (19.9)	1.35 (16.6)
Up to 13.5 GHz*	LDF2P-50-4	N Male: L2PNM	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.
Hangers and Adapters - for more hangers and adapters see pages 547-557.		Grounding and Surge Protection - for more information, see pages 559-564.	
Insulated Hangers and Adapters		Grounding Kit - factory attached, one-hole lug, 24 in (610 mm) lead	223158
Insulated Hanger , 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.	11662-3	Arrestor Plus® T-Series Lightning Surge Protector. Connectors on each end (universal version). Non-directional #,* <i>Interface and frequency band information.</i> <i>See page 563 for details.</i>	APT-#-*
Angle Adapter , for insulated hanger	40430-1	Gas Tube Surge Arrestor. Connectors on each end (universal version). Directional, dc pass capability #,* <i>Interface and frequency band information.</i> <i>See page 564 for details.</i>	SA-#-*
Stainless Steel Wraplock , for round tower members	12395-1	Weatherproofing - for more information, see page 565.	
Nylon Cable Tie Kit of 50. Recommended maximum spacing for outdoor installations is 3 ft (1 m)	40417	Cold Shrink Weatherproofing Kit 3/8" Coax-Type N to 3/8" Coax-Type N 3/8" Coax-Type N to Antenna Output	241474-3 241548-3
Nylon Cable Tie Kit 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)	CT-K350	Connector/Splice Weatherproofing Kit	221213
Velcro Cable Ties. Black, 8 inch. For indoor use only		Installer Pax™. Bulk packs are available for some hangers, adapters, grounding kits and cold shrink weatherproofing kits. See page 570.	
Kit of 10	VCT8-10		
Kit of 50	VCT8-50		