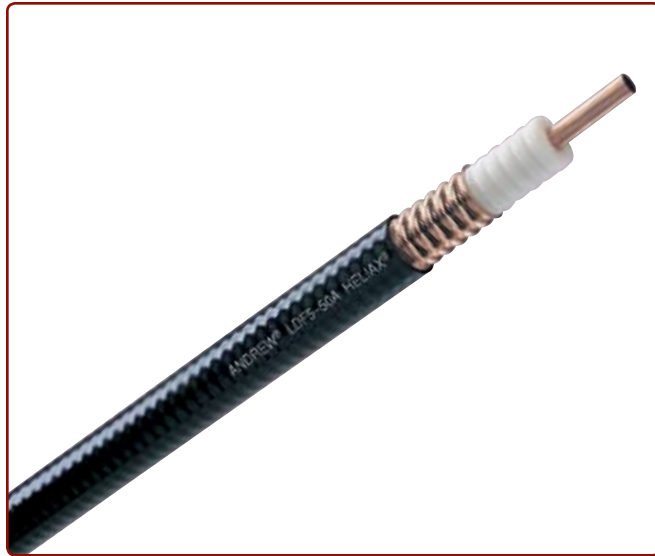


7/8 inch 50 Ohm, LDF5-50 HELIAX®



Attenuation and Average Power

Frequency MHz	Attenuation dB/100 ft	Attenuation dB/100 m	Average Power, kW
0.5	0.025	0.081	91.0
1	0.035	0.115	78.6
1.5	0.043	0.141	64.1
2	0.050	0.163	55.5
10	0.112	0.366	24.6
20	0.159	0.521	17.3
30	0.195	0.641	14.1
50	0.254	0.833	10.8
88	0.340	1.12	8.08
100	0.364	1.19	7.56
108	0.378	1.24	7.26
150	0.449	1.47	6.12
174	0.486	1.59	5.66
200	0.523	1.72	5.26
300	0.649	2.13	4.24
400	0.758	2.49	3.63
450	0.808	2.65	3.41
500	0.855	2.81	3.22
512	0.866	2.84	3.17
600	0.945	3.10	2.91
700	1.03	3.37	2.67
800	1.11	3.63	2.48
824	1.13	3.69	2.44
894	1.18	3.87	2.34
960	1.23	4.02	2.24
1000	1.25	4.12	2.19
1250	1.42	4.67	1.93
1500	1.58	5.18	1.74
1700	1.70	5.56	1.62
1800	1.75	5.75	1.57
2000	1.86	6.11	1.48
2100	1.92	6.29	1.44
2200	1.97	6.46	1.40
2300	2.02	6.63	1.36
3000	2.37	7.76	1.16
3400	2.55	8.37	1.08
4000	2.81	9.23	0.978
5000	3.23	10.6	0.853

Cable Ordering Information

Standard Cable	
7/8" Standard Cable, Standard Jacket	LDF5-50A
Fire Retardant Cable	
7/8" Fire Retardant Jacket (CATVR)	LDF5RN-50A
Low VSWR and Specialized Cables	
7/8" Low VSWR, specify operating band	LDF5P-50A-(**)
** Insert suffix number from "Low VSWR Specifications" table, page 177.	

Characteristics

Electrical	
Impedance, ohms	50 ± 1
Maximum Frequency, GHz	5
Velocity, percent	89
Peak Power Rating, kW	91
dc Resistance, ohms/1000 ft (1000 m)	
Inner	0.32 (1.05)
Outer	0.36 (1.18)
dc Breakdown, volts	6000
Jacket Spark, volts RMS	8000
Capacitance, pF/ft (m)	22.8 (75.0)
Inductance, µH/ft (m)	0.057 (0.187)
Mechanical	
Outer Conductor	Copper
Inner Conductor	Copper
Diameter over Jacket, in (mm)	1.09 (28)
Diameter over Copper Outer Conductor, in (mm)	0.98 (24.9)
Diameter Inner Conductor, in (mm)	0.355 (9.0)
Nominal Inside Transverse Dimensions, cm	2.11
Minimum Bending Radius, in (mm)	10 (250)
Number of Bends, minimum (typical)	15 (50)
Bending Moment, lb-ft (N·m)	12 (16.3)
Cable Weight, lb/ft (kg/m)	0.33 (0.49)
Tensile Strength, lb (kg)	325 (147)
Flat Plate Crush Strength, lb/in (kg/mm)	80 (1.4)

* A 75-ohm 7/8" diameter cable is available. Contact ERI for further information.

Standard Conditions:

For Attenuation, VSWR 1.0, ambient temperature 20°C (68°F).
For Average Power, VSWR 1.0, ambient temperature 40°C (104°F), inner conductor temperature 100°C (212°F); no solar loading.

7/8 inch 50 Ohm, LDF5-50 HELIAX®

Standard VSWR Specifications

Frequency Band, GHz	Type Number	Assembly VSWR, Maximum (R.L., dB)				
		1-25 ft (0.3-8 m)	25-100 ft (8-30 m)	100-200 ft (30-60 m)	200-500 ft (60-150 m)	Above 500 ft (150 m)
0.806-0.960 and 1.7-2.0	LDF5-50A	1.09 (27.3)*	1.10 (26.4)*	1.11 (25.7)*	1.13 (24.3)*	1.13 (24.3)**
	LDF5RN-50A	1.09 (27.3)*	1.10 (26.4)*	1.11 (25.7)*	1.13 (24.3)*	1.13 (24.3)**

* Expected typical values based on guaranteed 1.13 VSWR for bulk cable and Type N or DIN straight connectors. If guaranteed values are required, contact Andrew.

** 1.13 VSWR guaranteed for bulk standard cable lengths 500 ft and above.

Low VSWR Specifications, Type LDF5P-50A-()

Frequency Band, GHz	Type Number	Using Connector Type*	Assembly VSWR, Maximum (R.L., dB)				
			1-25 ft (0.3-8 m)	25-100 ft (8-30 m)	100-200 ft (30-60 m)	200-500 ft (60-150 m)	Above 500 ft (150 m)
0.780-0.960	LDF5P-50A-10A	N	1.07 (29.4)	1.07 (29.4)	1.08 (28.3)	1.10 (26.4)	1.10 (26.4)
		7-16 DIN	1.07 (29.4)	1.07 (29.4)	1.08 (28.3)	1.10 (26.4)	1.10 (26.4)
0.824-0.960	LDF5P-50A-40	N	1.06 (30.7)	1.07 (29.4)	1.08 (28.3)	1.09 (27.3)	1.10 (26.4)
		7-16 DIN	1.06 (30.7)	1.07 (29.4)	1.08 (28.3)	1.09 (27.3)	1.10 (26.4)
0.806-0.960 and 1.7-2.2	LDF5P-50A-42	N	1.10 (26.4)	1.10 (26.4)	1.10 (26.4)	1.10 (26.4)	1.10 (26.4)
		7-16 DIN	1.10 (26.4)	1.10 (26.4)	1.10 (26.4)	1.10 (26.4)	1.10 (26.4)
0.01-1.0*	LDF5P-50A-5A	N	1.10 (26.4)	1.10 (26.4)	1.15 (23.1)	1.20 (20.8)	1.30 (17.7)
		7/8" EIA	1.10 (26.4)	1.10 (26.4)	1.15 (23.1)	1.20 (20.8)	1.30 (17.7)
		7-16 DIN	1.10 (26.4)	1.10 (26.4)	1.15 (23.1)	1.20 (20.8)	1.30 (17.7)
1.38-1.540	LDF5P-50A-11A	N	1.10 (26.4)	1.10 (26.4)	1.12 (24.9)	1.15 (23.1)	1.15 (23.1)
		7/8" EIA	1.10 (26.4)	1.10 (26.4)	1.12 (24.9)	1.15 (23.1)	1.15 (23.1)
1.7-2.2	LDF5P-50A-41	N	1.10 (26.4)	1.10 (26.4)	1.10 (26.4)	1.10 (26.4)	1.10 (26.4)
		7-16 DIN	1.10 (26.4)	1.10 (26.4)	1.10 (26.4)	1.10 (26.4)	1.10 (26.4)
1.60-2.3	LDF5P-50A-12A	N Male	1.08 (28.3)	1.08 (28.3)	1.10 (26.4)	1.10 (26.4)	1.10 (26.4)
		N Female	1.12 (24.9)	1.12 (24.9)	1.12 (24.9)	1.12 (24.9)	1.12 (24.9)
		7/8" EIA	1.08 (28.3)	1.08 (28.3)	1.10 (26.4)	1.10 (26.4)	1.10 (26.4)
2.3-2.7	LDF5P-50A-13A	7-16 DIN	1.08 (28.3)	1.08 (28.3)	1.10 (26.4)	1.10 (26.4)	1.10 (26.4)
		N Male	1.10 (26.4)	1.10 (26.4)	1.12 (24.9)	1.15 (23.1)	1.15 (23.1)
		N Female	1.15 (23.1)	1.15 (23.1)	1.15 (23.1)	1.18 (21.6)	1.18 (21.6)
1.7-4.2	LDF5P-50A-7A	7/8" EIA	1.10 (26.4)	1.10 (26.4)	1.12 (24.9)	1.15 (23.1)	1.15 (23.1)
		7-16 DIN	1.10 (26.4)	1.10 (26.4)	1.12 (24.9)	1.15 (23.1)	1.15 (23.1)
		N Male	1.10 (26.4)	1.15 (23.1)	1.20 (20.8)	1.20 (20.8)	1.20 (20.8)
		N Female	1.15 (23.1)	1.20 (20.8)	1.20 (20.8)	1.25 (19.1)	1.25 (19.1)
		7-16 DIN Male	1.15 (23.1)	1.20 (20.8)	1.20 (20.8)	1.25 (19.1)	1.25 (19.1)
7-16 DIN Female	1.10 (26.4)	1.15 (23.1)	1.20 (20.8)	1.20 (20.8)	1.20 (20.8)		

* Connectors ordered separately

VSWR values apply to straight connectors only, 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.

7/8 inch 50 Ohm, LDF5-50 HELIAX®

Components and Accessories



N Male



N Female



7-16 DIN Male



7-16 DIN Female



7/8" EEA Flange



Splice

Connectors

Interface	Description	Type Number	Inner Contact Attachment	Outer Contact Attachment	Plating Code	Max. Length in (mm)	Max. Dia. in (mm)
N Male	OnePiece	LSPNM-RPC	Captivated	Self-Flare	SG	2.9 (74)	1.46 (37.2)
N Male	RingFlare	LSPNM-RC	Captivated	Self-Flare	SG	3.0 (76)	1.35 (34.3)
N Female	OnePiece	LSPNF-RPC	Captivated	Self-Flare	SG	2.7 (69)	1.46 (37.2)
N Female	RingFlare	LSPNF-RC	Captivated	Self-Flare	SG	2.9 (74)	1.35 (34.3)
7-16 DIN Male	OnePiece	LSPDM-RPC	Captivated	Self-Flare	SS	2.7 (69)	1.46 (37.2)
7-16 DIN Male	RingFlare	LSPDM-RC	Captivated	Self-Flare	SS	3.1 (79)	1.34 (34.0)
7-16 DIN Female	OnePiece	LSPDF-RPC	Captivated	Self-Flare	SS	2.33 (59.1)	1.46 (37.2)
7-16 DIN Female	RingFlare	LSPDF-RC	Captivated	RingFlare	SS	2.9 (74)	1.36 (34.5)
7/8" EIA Flange	–	L45R	Self-Tapping	Self-Flare	BB	3.3 (84)	2.25 (57)
7/8" EIA Flange	Right Angle	124800-1	Self-Tapping	Self-Flare	BB	3.9/1.3 (99/33)	2.25 (57)
Splice	–	L45Z	Self-Tapping	Self-Flare	BB	3.3 (84)	1.5 (38)

Plating Codes:

BB - Brass Body and Pin, BS - Brass Body and Silver Plated Pin, SG - Silver Plated Body and Gold Plated Pin, SS - Silver Plated Body and Pin

7/8 inch 50 Ohm, LDF5-50 HELIAX®

Components and Accessories

Hangers

For more hangers, adapters and mounting hardware see pages 209-213

Standard Hangers Kit of 10. Recommended maximum spacing is 3-ft (1 m). For different spacing recommendations, refer to Cable Hanger Spacing, page 209-213. 42396A-5

Hardware Kit of 10. 3/8" bolts, lockwashers, nuts

3/4" (19mm) long 31769-5

1" (25mm) long 31769-1

Snap-In Hangers Kit of 10. For prepunched 3/4" (19 mm) holes on tower member or adapters. Recommended maximum spacing is 3-ft. For different spacing recommendations, refer to Cable Hanger Spacing, page 209-213. 206706A-2

Click-On Hangers Kit of 10. Recommended maximum spacing is 3-ft. Mounting Hardware see page 214-221. L5CLICK

Kwik-Clamps Kit of 10. See page 214-221 for hanger options

Support/Hoisting Grip. Use at 200-ft (60m) intervals.

Grip with one clamp L5SGRIP

Support clamp kit of 10 L5SGRIP-SIK

Standard Hoisting Grip 19256B

Grounding and Surge Protection

For additional grounding kits and our surge protection offerings, see pages 222.

SureGround Grounding Kit with standard weatherproofing

Factory attached one-hole lug, 600 mm (24") lead SGL5-06B1

Factory attached two-hole lug, 600 mm (24") lead SGL5-06B2

Field attached two-hole lug, 1500 mm (59") lead SGL5-15B4

SureGround Plus Grounding Kit with weatherproofing boot

Factory attached one-hole lug, 600 mm (24") lead SGPL5-06B1

Factory attached two-hole lug, 600 mm (24") lead SGPL5-06B2

Field attached two-hole lug, 1500 mm (59") lead SGPL5-15B4

Arrestor Plus Integrated T-Series Arrestors – see page 614

Bulkhead N Female APTL5-BNF-(*)

Bulkhead 7-16 DIN Female APTL5-BDF-(*)

Weatherproofing

For additional weatherproofing information contact ERI.

WeatherShield™ Connector Protection Housing

LDF5 to LDF4 WS-L5L4

LDF5 to FSJ4 WS-L5F4

Cold Shrink Weatherproofing Kit

7/8" Coax to 7/8" Coax N Connectors 241474-5

1-5/8" Coax to 7/8" Coax N Connectors 241475-3

7/8" Coax to 1/4" Coax 241475-12

7/8" Coax to 3/8" or 1/2" Coax 241475-9

7/8" Coax to Antenna Type N or DIN interface 241548-5

7/8" to APTL5 Arrestors 241474-5

Connector/Splice Weatherproofing Kit 221213

Entry Systems

For entry systems offerings contact ERI.

Standard Cable Entry Boots 4" Boots 5" Boots

One Hole: 204679A-2 48939A-1

Two Hole: 204679A-18 –

Three Hole: 204679A-15 48939A-2

Tools

For additional tool offerings contact ERI.

EASIAx® Plus Automated Cable Prep Tool CPTL5A

EASIAx® Cutting Tool 222951

Cable Flaring Tool 224368

7/8" Connector Torque Wrench 244378

DIN Connector Coupling Torque Wrench 244377

N Connector Coupling Torque Wrench 244379



Cable Ordering Information

Standard Cable

1-5/8" Standard Cable, Standard Jacket	LDF7-50A
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Fire Retardant Cable

1-5/8" Fire Retardant Jacket (CATVR)	LDF7RN-50A
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Low VSWR and Specialized Cables

1-5/8" Low VSWR, specify operating band	LDF7P-50A-(**)
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** Insert suffix number from "Low VSWR Specifications" table, page 182.

Characteristics

Electrical

Impedance, ohms	50 ± 1
Maximum Frequency, GHz	2.5
Velocity, percent	88
Peak Power Rating, kW	315
dc Resistance, ohms/1000 ft (1000 m)	
Inner	0.25 (0.83)
Outer	0.16 (0.52)
dc Breakdown, volts	11000
Jacket Spark, volts RMS	10000
Capacitance, pF/ft (m)	23.1 (75.8)
Inductance, μH/ft (m)	0.058 (0.190)

Mechanical

Outer Conductor	Copper
Inner Conductor	Copper Tube
Diameter over Jacket, in (mm)	1.98 (50)
Diameter over Copper Outer Conductor, in (mm)	1.825 (46.3)
Diameter Inner Conductor, in (mm)	0.681 (17.3)
Nominal Inside Transverse Dimensions, cm	4.05
Minimum Bending Radius, in (mm)	20 (510)
Number of Bends, minimum (typical)	15 (50)
Bending Moment, lb-ft (N·m)	40 (54.2)
Cable Weight, lb/ft (kg/m)	0.82 (1.2)
Tensile Strength, lb (kg)	800 (363)
Flat Plate Crush Strength, lb/in (kg/mm)	120 (2.1)

Attenuation and Average Power

Frequency MHz	Attenuation dB/100 ft	Attenuation dB/100 m	Average Power, kW
0.5	0.014	0.044	247.0
1	0.019	0.063	175.0
1.5	0.024	0.077	142.0
2	0.027	0.089	123.0
10	0.062	0.202	54.3
20	0.088	0.289	38.1
30	0.109	0.356	30.9
50	0.142	0.465	23.6
88	0.191	0.627	17.5
100	0.205	0.671	16.4
108	0.213	0.699	15.7
150	0.254	0.834	13.2
174	0.276	0.904	12.2
200	0.297	0.976	11.3
300	0.372	1.22	9.01
400	0.437	1.43	7.67
450	0.467	1.53	7.18
500	0.496	1.63	6.76
512	0.503	1.65	6.67
600	0.550	1.81	6.09
700	0.602	1.97	5.57
800	0.650	2.13	5.15
824	0.662	2.17	5.06
894	0.694	2.28	4.83
960	0.724	2.38	4.63
1000	0.742	2.43	4.52
1250	0.848	2.78	3.95
1500	0.947	3.11	3.54
1700	1.02	3.35	3.28
2000	1.13	3.71	2.96
2300	1.23	4.05	2.72
2500	1.30	4.27	2.58

Standard Conditions:

For Attenuation, VSWR 1.0, ambient temperature 20°C (68°F), atmospheric pressure, dry air.

For Average Power, VSWR 1.0, inner temperature 100°C (212°F), ambient temperature 40°C (104°F), atmospheric pressure, dry air, no solar loading.