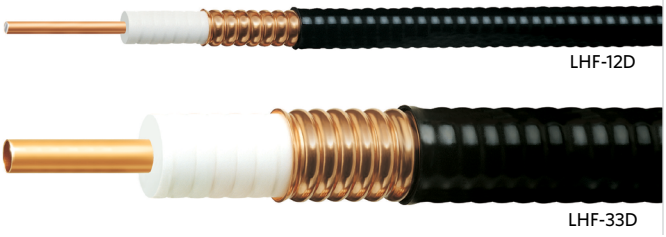
LHF Series

Low Loss High Flexible Foam Dielectric Feeder

Belden Wire and Cable Corporation



LHF-12D

LHF-33D

PRODUCT DESCRIPTION

LHF Series cables are low loss 50 Ohm cables featuring a foamed polyethylene dielectric, annularly corrugated copper shield and polyethylene jacket.

FEATURES	BENEFITS
• Low attenuation	• Suitable for long cable runs
• Low passive intermodulation	• Outperforms the industry requirements for low passive intermodulation
• Easy connectorization	• Full line of high-quality low intermodulation DIN and N connectors and cable preparation tools minimize installation time and expenses
• Factory tested and inspected	• 100% of all RF cables are inspected and tested to meet or exceed industry specifications including passive intermodulation
• Rugged and durable	• High-quality materials result in rugged cables that are able to withstand extreme environments without corrosion

SPECIFICATIONS

Inner Conductor	LHF-12D: Copper-clad aluminum wire LHF-33D: Smooth copper tube
Dielectric	Foamed polyethylene
Outer Conductor	Annularly corrugated copper tube
Jacket	Black polyethylene
Recommended Operating Temperature °F (°C)	-40 to +185 (-40 to +80)

PART NUMBERS AND PHYSICAL CHARACTERISTICS

Part Number	Cable Size in (mm)	Nominal Diameter in (mm)				Minimum Bend Radius in (mm)	Approx. Weight lbs/kft (kg/km)	Flat Plate Crush Resistance lbs/in (kg/mm)	Maximum Pulling Force lbs (kg)
		Inner Conductor	Dielectric	Outer Conductor	Jacket				
LHF-12D	½ (12)	0.20 (5.0)	0.49 (12.5)	0.56 (14.2)	0.65 (16.4)	4.92 (125)	163 (244)	0.16 (2.0)	249 (113)
LHF-33D	1¼ (33)	0.54 (13.7)	1.32 (33.6)	1.43 (36.4)	1.55 (39.4)	14.96 (380)	613 (915)	0.21 (2.4)	572 (260)

ELECTRICAL SPECIFICATIONS

Part Number	Cable Size in (mm)	Conductor DC Resistance Ohms/kft (Ohms/km)		Insulation Resistance mΩ km	Dielectric Strength for 1 minute DC Potential – Volts	Velocity of Propagation %	Peak Power Rating kW	Maximum Operating Frequency GHz	Characteristic Impedance Ohms	Typical Return Loss dB
		Inner	Outer							
LHF-12D	½ (12)	0.5 (1.6)	0.6 (1.9)	10,000	4,000	89	40	8.8	50	28
LHF-33D	1¼ (33)	0.3 (1.1)	0.3 (1.0)	10,000	10,000	89	200	3.3	50 ± 1	28

Frequency MHz	Attenuation at 20˚C dB/100 ft (dB/100 m)		Average Power Rating at Ambient 40˚C Inner Conductor 100˚C kW	
	LHF-12D	LHF-33D	LHF-12D	LHF-33D
30	0.35 (1.14)	0.13 (0.42)	6.10	21.30
100	0.65 (2.12)	0.24 (0.49)	3.32	11.50
150	0.79 (2.60)	0.30 (0.98)	2.71	9.32
450	1.40 (4.58)	0.54 (1.77)	1.55	5.23
824	1.92 (6.31)	0.76 (2.49)	1.13	3.78
894	2.00 (6.55)	0.80 (2.61)	1.09	3.61
960	2.08 (6.84)	0.83 (2.72)	1.05	3.48
1,000	2.13 (7.00)	0.85 (2.79)	1.03	3.40
1,700	2.84 (9.32)	1.17 (3.84)	0.78	2.53
1,800	2.93 (9.61)	1.21 (3.97)	0.76	2.45
2,000	3.11 (10.19)	1.30 (4.25)	0.71	2.31
2,400	3.38 (11.10)	1.44 (4.73)	0.65	2.09
2,700	3.81 (12.53)	1.56 (5.11)	0.61	1.95
3,000	3.95 (12.96)	1.66 (5.43)	0.58	1.84

Standard Conditions: V.S.W.R. 1.0,
Ambient Temperature 20°C/Attenuation is typical value.

Frequency MHz	V.S.W.R.	
	LHF-12D	LHF-33D
800–960	1.15	1.15
1,700–2,200	1.15	1.15

LHF (White Jacketed) Series

Low Loss High Flexible Foam Dielectric Feeder

PRODUCT DESCRIPTION

LHF Series cables are low loss 50 Ohm cables featuring a foamed polyethylene dielectric, annularly corrugated copper shield and polyethylene jacket.

FEATURES	BENEFITS
• Low attenuation	• Suitable for long cable runs
• Low passive intermodulation	• Outperforms the industry requirements for low passive intermodulation
• Easy connectorization	• Full line of high-quality low intermodulation DIN and N connectors and cable preparation tools minimize installation time and expenses
• Factory tested and inspected	• 100% of all RF cables are inspected and tested to meet or exceed industry specifications including passive intermodulation
• Rugged and durable	• High-quality materials result in rugged cables that are able to withstand extreme environments without corrosion

LHF-22DWH

LHF-42DWH

SPECIFICATIONS

Inner Conductor	LHF-22DWH: Smooth copper tube LHF-42DWH: Helically corrugated copper tube
Dielectric	Foamed polyethylene
Outer Conductor	Annularly corrugated copper tube
Jacket	White polyethylene
Recommended Operating Temperature °F (°C)	-40 to +185 (-40 to +80)

PART NUMBERS AND PHYSICAL CHARACTERISTICS

Part Number	Cable Size in (mm)	Nominal Diameter in (mm)				Minimum Bend Radius in (mm)	Approx. Weight lbs/kft (kg/km)	Flat Plate Crush Resistance lbs/in (kg/mm)	Maximum Pulling Force lbs (kg)
		Inner Conductor	Dielectric	Outer Conductor	Jacket				
LHF-22DWH	⅞ (22)	0.37 (9.4)	0.93 (23.5)	1.00 (25.3)	1.10 (28.0)	9.84 (250)	325 (485)	0.15 (1.8)	323 (147)
LHF-42DWH	1⅝ (42)	0.71 (18.1)	1.71 (43.5)	1.83 (46.5)	1.97 (50.0)	19.69 (500)	716 (1,068)	0.13 (1.6)	398 (181)

ELECTRICAL SPECIFICATIONS

Part Number	Cable Size in (mm)	Conductor DC Resistance Ohms/kft (Ohms/km)		Insulation Resistance mΩ km	Dielectric Strength for 1 minute DC Potential – Volts	Velocity of Propagation %	Peak Power Rating kW	Maximum Operating Frequency GHz	Characteristic Impedance Ohms	Typical Return Loss dB
		Inner	Outer							
LHF-22DWH	⅞ (22)	0.5 (1.5)	0.6 (1.9)	10,000	6,000	89	91	4.9	50 ± 1	28
LHF-42DWH	1⅝ (42)	0.4 (1.4)	0.2 (0.6)	10,000	11,000	89	302	2.5	50 ± 1	28

Frequency MHz	Attenuation at 20˚C dB/100 ft (dB/100 m)		Average Power Rating at Ambient 40˚C Inner Conductor 100˚C kW	
	LHF-22DWH	LHF-42DWH	LHF-22DWH	LHF-42DWH
30	0.18 (0.59)	0.10 (0.33)	13.95	30.60
100	0.34 (1.13)	0.20 (0.64)	7.36	16.42
150	0.43 (1.40)	0.24 (0.80)	5.98	13.28
450	0.77 (2.52)	0.45 (1.48)	3.32	7.37
824	1.07 (3.51)	0.64 (2.11)	2.46	5.28
894	1.12 (3.67)	0.67 (2.20)	2.36	5.05
960	1.16 (3.82)	0.70 (2.31)	2.27	4.85
1,000	1.19 (3.92)	0.73 (2.38)	2.22	4.74
1,700	1.61 (5.29)	1.00 (3.28)	1.67	3.50
1,800	1.67 (5.47)	1.04 (3.40)	1.62	3.39
2,000	1.77 (5.81)	1.11 (3.63)	1.53	3.18
2,400	1.97 (6.46)	1.23 (4.05)	1.38	2.86
2,700	2.10 (6.88)	1.27 (4.18)	1.31	2.77

Frequency MHz	V.S.W.R.	
	LHF-22DWH	LHF-42DWH
800–960	1.15	1.15
1,700–2,200	1.15	1.15

Standard Conditions: V.S.W.R. 1.0,
Ambient Temperature 20°C/Attenuation is typical value.