

CELLFLEX® Cable

LCF12-50 Series 1/2" Low-Loss Foam Coax

APPLICATIONS

OEM jumpers, Main feed transitions to equipment, GPS lines,
Riser-rated In-Building (JFN types)

GENERAL INFORMATION

Cable Type	Foam-Dielectric, Corrugated
Size	1/2"

STRUCTURE

Inner Conductor Material	Copper-Clad Aluminum Wire
Diameter Inner Conductor, mm (in)	4.8 (0.190)
Diameter Dielectric, mm (in)	11.3 (0.44)
Outer Conductor Material	Annularly Corrugated Copper
Diameter Copper Outer Conductor, mm (in)	13.8 (0.54)
Diameter over Jacket Nominal, mm (in)	16.2 (0.64)

MECHANICAL SPECIFICATIONS

Cable Weight, kg/m (lb/ft)	0.22 (0.15)
Minimum Bending Radius, Single Bend, mm (in)	70 (3)
Minimum Bending Radius, Repeated Bends, mm (in)	125 (5)
Bending Moment, N•m (lb-ft)	5.0 (3.7)
Flat Plate Crush Strength, N/mm (lb/in)	20.4 (110)
Tensile Strength, N (lb)	1100 (247)
Recommended / Maximum Clamp Spacing, m (ft)	0.6 / 1.0 (2.0 / 3.25)

ELECTRICAL SPECIFICATIONS

Impedance, ohm	50 +/- 1
Velocity, percent	88
Capacitance, pF/m (pF/ft)	76.0 (23.2)
Inductance, µH/m (µH/ft)	0.190 (0.058)
Maximum Frequency, GHz	8.8
Peak Power Rating, kW	38
RF Peak Voltage, volts	1950
Jacket Spark, volt RMS	8000
Inner Conductor dc Resistance, ohm/1000 m (ohm/1000 ft)	1.57 (0.48)
Outer Conductor dc Resistance, ohm/1000 m (ohm/1000 ft)	1.93 (0.59)

See Installation, Operation and Storage Temperatures on page 16.

CONNECTORS AND ACCESSORIES

Connectors	See pages 53-55
Jumpers	See pages 60-65
Accessories	See pages 75-80
Coaxial Devices	See pages 84-85
Technical Appendix	See pages 831-840



LCF12-50J/JFN ATTENUATION AND AVERAGE POWER

Frequency MHz	Attenuation dB/100 m	Attenuation dB/100 ft.	Average Power kW
0.5	0.149	0.045	20.5
1	0.211	0.064	20.5
1.5	0.258	0.079	20.5
2	0.298	0.091	20.5
10	0.671	0.204	12.7
20	0.951	0.290	8.93
30	1.17	0.356	7.27
50	1.51	0.462	5.61
88	2.02	0.616	4.20
100	2.16	0.658	3.94
108	2.24	0.684	3.78
150	2.66	0.810	3.20
174	2.87	0.875	2.96
200	3.08	0.940	2.75
300	3.81	1.16	2.23
400	4.43	1.35	1.92
450	4.71	1.44	1.80
500	4.98	1.52	1.71
512	5.04	1.54	1.69
600	5.48	1.67	1.55
700	5.95	1.81	1.43
800	6.39	1.95	1.33
824	6.49	1.98	1.31
894	6.78	2.07	1.25
900	6.80	2.07	1.25
925	6.90	2.10	1.23
960	7.04	2.15	1.21
1000	7.20	2.20	1.18
1250	8.12	2.48	1.05
1500	8.97	2.73	0.947
1700	9.61	2.93	0.884
1800	9.91	3.02	0.857
2000	10.5	3.20	0.809
2100	10.8	3.29	0.787
2200	11.1	3.38	0.767
2400	11.6	3.54	0.731
3000	13.2	4.01	0.645
3500	14.4	4.38	0.591
4000	15.5	4.73	0.548
4900	17.4	5.31	0.488
6000	19.6	5.97	0.434
7000	21.4	6.54	0.396
8000	23.2	7.08	0.366
8800	24.6	7.49	0.346

Standard Conditions:

For attenuation: VSWR 1.0, cable 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.

ORDERING INFORMATION

Model Number	Jacket
LCF12-50J	Standard
LCF12-50JFN	Flame Retardant
LCF12-50JGR	Standard, Gray

Phase stabilized versions available upon request.