PRODUCT DATASHEET

LCF12-50JFN

1/2" CELLFLEX® Low-Loss Foam-Dielectric Coaxial Cable

CELLFLEX® 1/2" low loss flexible cable; flame retardant/ halogen free jacket

Feature / Benefits

Low Attenuation
The low attenuation of CELLFLEX® coaxial cable results in highly efficient signal transferin your RF system.

Complete Shielding
The solid outer conductor of CELLFLEX® coaxial cable creates a continuous RFI/EMI shield that minimizes system interference.

Low VSWR
Special low VSWR versions of CELLFLEX® coaxial cables contribute to low system noise.

- **Outstanding Intermodulation Performance**

  CELLFLEX® coaxial cable's solid inner and outer conductors virtually eliminate intermods. Intermodulation performance is also confirmed with state-of-the-art equipment at the RFS factory.

- **High Power Rating**

  Due to their low attenuation, outstanding heat transfer properties and temperature stabilized dielectric
  materials, CELLFLEX® cable provides safe long term operating life at high transmit power levels.

- **Wide Range of Application**

  Typical areas of application are: feedlines for broadcast and terrestrial microwave antennas, wireless cellular, PCS and ESMR base stations, cabling of antenna arrays, and radio equipment interconnects.

- **Meets/Exceeds:**

  IEC 60754-1, -2; IEC 60332-1-1, -2; IEC 61034-1, -2; IEC 60332-3-24; EN45545-2; EN50575

Technical features

APPLICATIONS

Applications	OEM jumpers, Main feed transitions to equipment, GPS lines, Riser-rated In-Building

STRUCTURE

Cable Type	Foam-Dielectric, Corrugated
Size	1/2
Inner Conductor Diameter	4.8mm (0.19in)
Inner Conductor Material	Copper-Clad Aluminum Wire
Dielectric Diameter	11.3mm (0.44in)
Dielectric Material	Foam Polyethylene
Outer Conductor Diameter	13.8mm (0.54in)
Outer Conductor Material	Corrugated Copper
Jacket Diameter	15.8mm (0.62in)
Jacket Material	Black Polyethylene, Metalhydroxite Filling

TESTING AND ENVIRONMENTAL

Fire Performance	Flame Retardant, LS0H
Installation Temperature	-25°C to 60°C (-13°F to 140°F)
Storage Temperature	-70°C to 85°C (-94°F to 185°F)
Operation Temperature	-50°C to 85°C (-58°F to 185°F)

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ELECTRICAL SPECIFICATIONS

Impedance	50 +/- 1 Ω
Maximum Frequency	8.8 GHz
Velocity	87 %
Capacitance	76pF/m (23.2pF/ft)
Inductance	0.19µH/m (0.058µH/ft)
Peak Power Rating	38 kW
RF Peak Voltage	1950 Volts
Jacket Spark	8000 Volt RMS
Inner Conductor dc Resistance	1.62ohm/1000 m (0.5ohm/1000 ft)
Outer Conductor dc Resistance	3.55ohm/1000 m (1.08ohm/1000 ft)
Phase Stabilized	Phase stabilized and phase matched cables and assemblies are available upon request.

MECHANICAL SPECIFICATIONS

Cable Weight	0.201kg/m (0.135lb/ft)
Minimum Bending Radius	70mm (3in)
Minimum Bending Radius	125mm (5in)
Bending Moment	6.5 (4.79)
Tensile Strength	1050N (236lb)
Recommended / Maximum Clamp Spacing	0.6 / 1 (2 / 3.25)

ATTENUATION @ 20°C (68°F) AND POWER RATING @ 40°C (104°F)

Frequency, MHz	dB per 100m	dB per 100ft	Power, kW
100	2.18	0.664	3.45
200	3.12	0.95	2.41
450	4.77	1.45	1.57
700	6.03	1.84	1.24
800	6.48	1.98	1.16
900	6.91	2.1	1.09
1800	10.1	3.07	0.745
2000	10.7	3.26	0.702
2200	11.3	3.44	0.666
2400	11.8	3.61	0.634
2700	12.7	3.86	0.593
3000	13.4	4.09	0.559
3500	14.7	4.47	0.512
4000	15.8	4.83	0.474
5000	18	5.5	0.416
6000	20.7	6.3	0.374
7000	22	6.7	0.341
8800	25.2	7.69	0.298

External Document Links

Notes

NOTES

- LCF12-50JFN**TC**: **TC** cables (temperature cycled) are cables that are aged in order to reduce hysteresis effects. Available upon request.