Product Data Sheet  
LCF12-50JFN

1/2” CELLLFLEX® Low-Loss Foam-Dielectric Coaxial Cable

**Product Description**

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

Application: In Building, Wireless Communication, In TunnelHF Defense, Microwave, Mobile Radio

**Features/Benefits**

- **Low Attenuation**
  - The low attenuation of CELLLFLEX® coaxial cable results in highly efficient signal transfer in your RF system.

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

- **Low VSWR**
  - Special low VSWR versions of CELLLFLEX® coaxial cables contribute to low system noise.

- **Outstanding Intermodulation Performance**
  - CELLLFLEX® 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, CELLLFLEX® 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.

**Technical Features**

**Structure**

- Inner conductor: Copper-Clad Aluminum Wire [mm (in)] 4.8 (0.19)
- Dielectric: [mm (in)] 11.3 (0.44)
- Outer conductor: Annularly Corrugated Copper [mm (in)] 13.8 (0.54)
- Jacket: Polyethylene, PE, Metalhydroxite Filling [mm (in)] 15.8 (0.62)

**Mechanical Properties**

- Weight, approximately [kg/m (lb/ft)] 0.22 (0.15)
- Minimum bending radius, single bending [mm (in)] 70 (3)
- Minimum bending radius, repeated bending [mm (in)] 125 (5)
- Bending moment [Nm (lb-ft)] 6.5 (4.79)
- Flat plate crush strength [N/mm (lb/in)] 20.4 (10)
- Max. tensile force [N (lb)] 1100 (247)
- Recommended / maximum clamp spacing [m (ft)] 0.6 / 1.0 (2.0 / 3.25)

**Electrical Properties**

- Characteristic impedance [Ω] 50 +/- 1
- Relative propagation velocity [%] 88
- Capacitance [pF/m (pf/ft)] 76.0 (23.2)
- Inductance [µH/m (µH/ft)] 0.190 (0.058)
- Max. operating frequency [GHz] 8.8
- Jacket spark test RMS [V] 8000
- Peak power rating [kW] 38
- RF Peak voltage rating [V] 1950
- DC-resistance inner conductor [Ω/km (Ω/1000ft)] 1.57 (0.48)
- DC-resistance outer conductor [Ω/km (Ω/1000ft)] 2.30 (0.70)

**Recommended Temperature Range**

- Storage temperature [°C (°F)] -70 to +85 (-94 to +185)
- Installation temperature [°C (°F)] -25 to +60 (-13 to +140)
- Operation temperature [°C (°F)] -50 to +85 (-58 to +185)

**Other Characteristics**

- Fire Performance: Flame Retardant, LS0H
- VSWR Performance: Standard [dB (VSWR)] Contact RFS for your VSWR performance specification for your required frequency band.
- Other Options: Phase stabilized and phase matched cables and assemblies are available upon request.

**Typical Operating Characteristics**

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<th>Attenuation [dB/100m]</th>
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**Contact Information**


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Radio Frequency Systems