PRODUCT DATASHEET

# LCF38-50JFN

## 3/8" CELLFLEX® Low-Loss Foam-Dielectric Coaxial Cable

CELLFLEX® 3/8" low loss flexible cable; flame retardant/ halogen free jacket

FEATURES / 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 cables 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; IEC 61034-1, -2; IEC 60332-3-24; EN50575**

3/8" CELLFLEX® Low-Loss Foam Dielectric Coaxial Cable

## Technical features

### APPLICATIONS

| | | |
|---|---|---|
| **Applications** | | Indoor, Wireless Communication, HF Defense, Microwave, Mobile Radio, Cable Solutions |

### STRUCTURE

| | | |
|---|---|---|
| **Cable Type** | | Foam-Dielectric, Corrugated |
| **Size** | | 3/8 |
| **Inner Conductor Diameter** | mm (in) | 3.1 (0.12) |
| **Inner Conductor Material** | | Copper-Clad Aluminum Wire |
| **Dielectric Diameter** | mm (in) | 7.2 (0.28) |
| **Dielectric Material** | | Foam Polyethylene |
| **Outer Conductor Diameter** | mm (in) | 9.5 (0.37) |
| **Outer Conductor Material** | | Corrugated Copper |
| **Jacket Diameter** | mm (in) | 11.2 (0.44) |
| **Jacket Material** | | Black Polyethylene, Metalhydroxite Filling |

### TESTING AND ENVIRONMENTAL

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

## ELECTRICAL SPECIFICATIONS

| | | |
|---|---|---|
| **Impedance** | Ω | 50 +/- 1.5 |
| **Maximum Frequency** | GHz | 13.5 |
| **Velocity** | % | 88 |
| **Capacitance** | pF/m (pF/ft) | 76 (23.2) |
| **Inductance** | uH/m (uH/ft) | 0.19 (0.058) |
| **Peak Power Rating** | kW | 15.4 |
| **RF Peak Voltage** | Volts | 1240 |
| **Jacket Spark** | Volt RMS | 5000 |
| **Inner Conductor dc Resistance** | Ω/1000 m (Ω/1000 ft) | 3.8 (1.16) |
| **Outer Conductor dc Resistance** | Ω/1000 m (Ω/1000 ft) | 2.9 (0.88) |
| **Return Loss (VSWR) Performance** | | Standard 20dB (1.222) / Premium 23/24dB (1.152/1.135) on specified frequencies |
| **Phase Stabilized** | | Phase stabilized and phase matched cables and assemblies are available upon request. |

## MECHANICAL SPECIFICATIONS

| | | |
|---|---|---|
| **Cable Weight, Nominal** | kg/m (lb/ft) | 0.12 (0.08) |
| **Minimum Bending Radius, Single Bend** | mm (in) | 50 (2) |
| **Minimum Bending Radius, Repeated Bends** | mm (in) | 95 (4) |
| **Bending Moment** | Nm (lb-ft) | 1.9 (1.4) |
| **Tensile Strength** | N (lb) | 530 (119) |
| **Recommended / Maximum Clamp Spacing** | m (ft) | 0.5 / 1 (1.75 / 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** | 3.43 | 1.04 | 2.12 |
| **200** | 4.89 | 1.49 | 1.48 |
| **450** | 7.44 | 2.27 | 0.98 |
| **700** | 9.38 | 2.86 | 0.77 |
| **800** | 10.10 | 3.07 | 0.72 |
| **900** | 10.70 | 3.27 | 0.68 |
| **1800** | 15.50 | 4.74 | 0.47 |
| **2000** | 16.50 | 5.01 | 0.44 |
| **2200** | 17.30 | 5.28 | 0.42 |
| **2400** | 18.20 | 5.54 | 0.40 |
| **3000** | 20.50 | 6.26 | 0.35 |
| **3500** | 22.40 | 6.82 | 0.32 |
| **4000** | 24.10 | 7.35 | 0.30 |
| **5000** | 27.40 | 8.34 | 0.27 |
| **13500** | 48.80 | 14.90 | 0.15 |

| External Document Links | Notes |
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