



LCFS114-50JA

1-1/4" CELLFLEX® Low-Loss Foam-Dielectric Coaxial Cable



CELLFLEX® 1-1/4" low loss cable

Features / Benefits

- Ultra Low Attenuation**
The reduced attenuation of CELLFLEX® coaxial cable results in extremely efficient signal transfer in your RF system, especially at high frequencies.
- 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.

Technical Features

STRUCTURE

| | |
|--------------------------|------------------------|
| Cable Type | LCF |
| Size | 1-1/4" |
| Jacket Option | Outdoor |
| Inner Conductor Material | Corrugated Copper Tube |
| Dielectric Material | Foam Polyethylen |
| Outer Conductor Material | Corrugated Copper |
| Jacket Material | Black Polyethylen |

MECHANICAL SPECIFICATION

| | |
|---------------------------------------|-----------------------|
| Inner Conductor Diameter | 13.1mm (0.516in) |
| Dielectric Diameter | 31.2mm (1.228in) |
| Outer Conductor Diameter | 35.9mm (1.413in) |
| Jacket Diameter | 39mm (1.535in) |
| Cable Weight | 0.84kg/m (0.564lb/ft) |
| Min. Bending Radius, Single Bend | 200mm (7.874in) |
| Min. Bending Radius, Repeated Bends | 380mm (14.961in) |
| Bending Moment | 43Nm (31.734ft-lbf) |
| Tensile Strength | 2,490N (559.774lb) |
| Max. Pulling Length per Hoisting Grip | 60m (2,362.205in) |
| Recommended Clamp Spacing | 1m (3.281ft) |
| Max. Clamp Spacing | 0.2m (0.656ft) |



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ELECTRICAL SPECIFICATION

| | |
|--------------------------------|---|
| Impedance | 50 ±1 Ω |
| Max. Operating Frequency | 3.7 GHz |
| Velocity | 89 % |
| Capacitance | 74pF/m (22.555pF/ft) |
| Peak Power Rating | 176 kW |
| RF Peak Voltage | 4.2 kV |
| Jacket Spark | 5 kV |
| DC-Resistance Inner Conductor | 0.83Ω/km (0.253Ω/kft) |
| DC-Resistance Outer Conductor | |
| Return Loss (VSWR) Performance | Standard 20dB (1.222) / Premium 23/24dB (1.152/1.135) on specified frequencies. |

TESTING AND ENVIRONMENTAL

| | |
|-----------------------------------|---|
| Fire Performance | Halogen Free |
| Compliance | RoHS 2011/65/EU China RoHS SJ/T 11364-2006 IEC 60754-1/-2 Halogen Acid Gases REACH (EC 1907/2006) IEC 60754-1/-2 Halogen Acid Gases |
| Phase Stabilized | Phase stabilized and phase matched cables are available upon request. |
| Installation Temperature, Minimum | -40°C (-40°F) |
| Installation Temperature, Maximum | 60°C (140°F) |
| Storage Temperature, Minimum | -70°C (-94°F) |
| Storage Temperature, Maximum | 85°C (185°F) |
| Operation Temperature, Minimum | -50°C (-58°F) |
| Operation Temperature, Maximum | 85°C (185°F) |



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ATTENUATION AND POWER RATING

| Frequency, MHz | dB per 100m | dB per 100ft | Power, kW |
|----------------|--|--------------|-----------|
| 75 | 0.70 | 0.21 | 15.62 |
| 100 | 0.82 | 0.25 | 13.46 |
| 150 | 1.01 | 0.31 | 10.90 |
| 200 | 1.17 | 0.36 | 9.37 |
| 450 | 1.81 | 0.55 | 6.09 |
| 700 | 2.29 | 0.70 | 4.80 |
| 800 | 2.47 | 0.75 | 4.46 |
| 870 | 2.58 | 0.79 | 4.26 |
| 900 | 2.63 | 0.80 | 4.18 |
| 960 | 2.73 | 0.83 | 4.03 |
| 1800 | 3.88 | 1.18 | 2.83 |
| 2000 | 4.12 | 1.26 | 2.67 |
| 2200 | 4.35 | 1.33 | 2.53 |
| 2400 | 4.58 | 1.39 | 2.40 |
| 2600 | 4.80 | 1.46 | 2.29 |
| 2700 | 4.90 | 1.49 | 2.24 |
| 3000 | 5.21 | 1.59 | 2.11 |
| 3500 | 5.71 | 1.74 | 1.93 |
| 3700 | 5.90 | 1.80 | |
| Note | @ 20°C (68°F) and power rating @ 40°C (104°F). | | |

NOTES

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