



CELLFLEX® 1/4" low loss flexible cable

**FEATURES / BENEFITS**

• **Low Attenuation**

The low attenuation of CELLFLEX® coaxial cable results in highly efficient signal transfer in 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.



1/4" CELLFLEX® Superflexible Foam Dielectric Coaxial Cable

**Technical features**

**APPLICATIONS**

|              |   |
|--------------|---|
| Applications | OEM jumpers, BTS inter-cabinet connections, GPS lines, Microwave IF cabling, intended for outdoor usage |
|--------------|---|

**STRUCTURE**

|                          |         |                             |
|--------------------------|---------|-----------------------------|
| Size                     |         | 1/4                         |
| Jacket Option            |         | Black                       |
| Inner Conductor          | mm (in) | 2.4 (0.09)                  |
| Inner Conductor Material |         | Copper-Clad Aluminum Wire   |
| Dielectric               | mm (in) | 6 (0.24)                    |
| Dielectric Material      |         | Foam Polyethylene           |
| Outer Conductor          | mm (in) | 7.5 (0.3)                   |
| Outer Conductor Material |         | Corrugated Copper           |
| Jacket                   | mm (in) | 10 (0.39)                   |
| Jacket Material          |         | Polyethylene, PE            |
| Cable Type               |         | Foam-Dielectric, Corrugated |

**TESTING AND ENVIRONMENTAL**

|                          |        |                        |
|--------------------------|--------|------------------------|
| Fire Performance         |        | Halogene Free          |
| Installation Temperature | °C(°F) | -40 to 60 (-40 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, Ohm  | Ω                    | 50 +/- 1.5   |
| Maximum Frequency                                       | GHz                  | 15.8   |
| Velocity, percent                                       | %                    | 83   |
| Capacitance   | pF/m (pF/ft)         | 80 (24)  |
| Inductance, uH/m (uH/ft)                                | μH/m (μH/ft)         | 0.205 (0.063)  |
| Peak Power Rating                                       | kW                   | 10.9   |
| RF Peak Voltage   | Volts                | 1050   |
| Jacket Spark  | Volt RMS             | 5000   |
| Inner Conductor dc Resistance, Ω/km (Ω/kft)             | Ω/1000 m (Ω/1000 ft) | 6.1 (1.86)   |
| Outer Conductor dc Resistance, ohm/1000 m (Ohm/1000 ft) | Ω/1000 m (Ω/1000 ft) | 4.4 (1.34)   |
| Return Loss (VSWR) Performance                          |                      | Standard for 40-2700, 3300-4200, 4400-5925 MHz, Premium according to B-Class         |
| Min. Return Loss (Max. VSWR)                            | dB (VSWR)            | Standard 20 (1.222), Premium 24 (1.135)/ 23 (1.152)                                  |
| Phase Stabilized  |                      | Phase stabilized and phase matched cables and assemblies are available upon request. |
| Temperature & Power                                     |                      | Standard   |

**MECHANICAL SPECIFICATIONS**

|  |              |                       |
|--|--------------|-----------------------|
| Cable Weight, Nominal                  | kg/m (lb/ft) | 0.11 (0.074)          |
| Minimum Bending Radius, Single Bend    | mm (in)      | 40 (1.6)              |
| Minimum Bending Radius, Repeated Bends | mm (in)      | 85 (3.3)              |
| Bending Moment, Nm (lb-ft)             | Nm (lb*ft)   | 1.9 (1.4)             |
| Tensile Strength                       | N (lb)       | 890 (200)             |
| Recommended / Maximum Clamp Spacing    | m (ft)       | 0.5 / 1 (1.75 / 3.25) |



**ATTENUATION AND POWER RATING**

| Frequency, MHz | dB per 100m | dB per 100ft | Power, kW |
|----------------|-------------|--------------|-----------|
| 0.5            | 0.29        | 0.09         | 10.90     |
| 1              | 0.41        | 0.13         | 10.90     |
| 1.5            | 0.51        | 0.15         | 10.90     |
| 2              | 0.58        | 0.18         | 10.90     |
| 10             | 1.31        | 0.40         | 5.56      |
| 20             | 1.86        | 0.57         | 3.92      |
| 30             | 2.28        | 0.70         | 3.20      |
| 50             | 2.95        | 0.90         | 2.47      |
| 88             | 3.94        | 1.20         | 1.85      |
| 100            | 4.20        | 1.28         | 1.73      |
| 108            | 4.37        | 1.33         | 1.67      |
| 150            | 5.17        | 1.58         | 1.41      |
| 174            | 5.58        | 1.70         | 1.30      |
| 200            | 6           | 1.83         | 1.21      |
| 300            | 7.40        | 2.25         | 0.99      |
| 400            | 8.59        | 2.62         | 0.85      |
| 450            | 9.13        | 2.78         | 0.80      |
| 500            | 9.65        | 2.94         | 0.76      |
| 512            | 9.77        | 2.98         | 0.75      |
| 600            | 10.60       | 3.24         | 0.69      |
| 700            | 11.50       | 3.51         | 0.63      |
| 800            | 12.40       | 3.77         | 0.59      |
| 824            | 12.60       | 3.83         | 0.58      |
| 894            | 13.10       | 4            | 0.56      |
| 900            | 13.20       | 4.01         | 0.55      |
| 925            | 13.40       | 4.07         | 0.55      |
| 960            | 13.60       | 4.15         | 0.54      |
| 1000           | 13.90       | 4.24         | 0.52      |
| 1250           | 15.70       | 4.78         | 0.46      |
| 1500           | 17.30       | 5.27         | 0.42      |
| 1700           | 18.50       | 5.64         | 0.39      |
| 1800           | 19.10       | 5.82         | 0.38      |
| 2000           | 20.20       | 6.16         | 0.36      |
| 2100           | 20.80       | 6.33         | 0.35      |
| 2200           | 21.30       | 6.49         | 0.34      |
| 2400           | 22.30       | 6.81         | 0.33      |
| 3000           | 25.30       | 7.70         | 0.29      |
| 3500           | 27.50       | 8.39         | 0.27      |
| 4000           | 29.70       | 9.05         | 0.25      |
| 5000           | 33.70       | 10.30        | 0.22      |



**LCF14-50J**

1/4" CELLFLEX® Low loss Flexible Cable

|              |       |       |      |
|--------------|-------|-------|------|
| <b>6000</b>  | 37.40 | 11.40 | 0.20 |
| <b>7000</b>  | 40.80 | 12.40 | 0.18 |
| <b>8000</b>  | 44.10 | 13.50 | 0.17 |
| <b>9000</b>  | 47.30 | 14.40 | 0.15 |
| <b>10000</b> | 50.30 | 15.30 | 0.15 |
| <b>12000</b> | 56.10 | 17.10 | 0.13 |
| <b>14000</b> | 61.50 | 18.80 | 0.12 |
| <b>15800</b> | 66.20 | 20.20 | 0.11 |

External Document Links

Notes

Phase stabilized versions available upon request.  
Phase stabilized versions available upon request.