



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.



Technical features

APPLICATIONS

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

STRUCTURE

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

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 40-5925 MHz, Premium according to B-Class |
| Min. Return Loss (Max. VSWR) | dB (VSWR) | Standard 20 (1.222), Premium 24 (1.135) |
| 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

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

External Document Links

Notes

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