



CELLFLEX®1-1/4" premium attenuation 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 |  | Indoor | Wireless Communication | TV & Radio | HF Defense | Mobile Radio | Cable Solutions |
|--------------|--|--------|------------------------|------------|------------|--------------|-----------------|
|--------------|--|--------|------------------------|------------|------------|--------------|-----------------|

#### STRUCTURE

| Cable Type      |         | Foam-Dielectric, Corrugated |
|-----------------|---------|-----------------------------|
| Size            |         | 1-1/4                       |
| Jacket Option   |         | Black                       |
| Inner Conductor | mm (in) | 13.1 (0.52) 13.1            |
| Dielectric      | mm (in) | 32.7 (1.29) 32.7            |
| Outer Conductor | mm (in) | 35.9 (1.41) 35.9            |
| Jacket          | mm (in) | 39 (1.54) 39                |

#### TESTING AND ENVIRONMENTAL

| Fire Performance                      |        | Flame Retardant, LSOH                                                                                                                                                                                                                                           |
|---------------------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Flame Retardant Jacket Specifications |        | Meets/Exceeds: IEC 60754-1, -2; IEC 60332-1, -3.C; UL 1581; UL 1666; NEC type CATVR; CPR: <a href="https://products.rfsworld.com/userfiles/cpr/rfs-products-cpr-compliance.pdf">https://products.rfsworld.com/userfiles/cpr/rfs-products-cpr-compliance.pdf</a> |
| Installation Temperature              | °C(°F) | -15 to 60 (5 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                                                  | $\Omega$                                 | 50 +/- 1                                                                             |
| Maximum Frequency                                               | GHz                                      | 3.7                                                                                  |
| Velocity, percent                                               | %                                        | 89                                                                                   |
| Capacitance                                                     | pF/m (pF/ft)                             | 75 (22.9)                                                                            |
| Inductance, uH/m (uH/ft)                                        | $\mu$ H/m ( $\mu$ H/ft)                  | 0.188 (0.057)                                                                        |
| Peak Power Rating                                               | kW                                       | 176                                                                                  |
| RF Peak Voltage                                                 | Volts                                    | 4200                                                                                 |
| Jacket Spark                                                    | Volt RMS                                 | 10000                                                                                |
| Inner Conductor dc Resistance,<br>$\Omega$ /km ( $\Omega$ /kft) | $\Omega$ /1000 m<br>( $\Omega$ /1000 ft) | 0.83 (0.25)                                                                          |
| Outer Conductor dc Resistance,<br>ohm/1000 m (Ohm/1000 ft)      | $\Omega$ /1000 m<br>( $\Omega$ /1000 ft) | 0.73 (0.22)                                                                          |
| Return Loss (VSWR) Performance                                  |                                          | Standard for 40-2700 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) | 0.97 (0.65)        |
| Minimum Bending Radius, Single Bend    | mm (in)      | 200 (8)            |
| Minimum Bending Radius, Repeated Bends | mm (in)      | 380 (15)           |
| Bending Moment, Nm (lb-ft)             | Nm (lb*ft)   | 43 (32)            |
| Tensile Strength                       | N (lb)       | 2490 (560)         |
| Recommended / Maximum Clamp Spacing    | m (ft)       | 1 / 1.2 (3.25 / 4) |

**ATTENUATION AND POWER RATING**

| Frequency, MHz | dB per 100m | dB per 100ft | Power, kW |
|----------------|-------------|--------------|-----------|
| 0.5            | 0.06        | 0.02         | 176       |
| 1              | 0.08        | 0.02         | 139       |
| 1.5            | 0.10        | 0.03         | 113       |
| 2              | 0.11        | 0.03         | 98.20     |
| 10             | 0.25        | 0.08         | 43.60     |
| 20             | 0.36        | 0.11         | 30.70     |
| 30             | 0.44        | 0.13         | 25        |
| 50             | 0.57        | 0.17         | 19.20     |
| 88             | 0.77        | 0.23         | 14.40     |
| 100            | 0.82        | 0.25         | 13.50     |
| 108            | 0.85        | 0.26         | 12.90     |
| 150            | 1.01        | 0.31         | 10.90     |
| 174            | 1.09        | 0.33         | 10.10     |
| 200            | 1.17        | 0.36         | 9.40      |
| 300            | 1.45        | 0.44         | 7.58      |
| 400            | 1.69        | 0.52         | 6.50      |
| 450            | 1.81        | 0.55         | 6.07      |
| 500            | 1.91        | 0.58         | 5.76      |
| 512            | 1.94        | 0.59         | 5.67      |
| 600            | 2.11        | 0.64         | 5.21      |
| 700            | 2.29        | 0.70         | 4.80      |
| 750            | 2.38        | 0.73         | 4.62      |
| 800            | 2.47        | 0.75         | 4.45      |
| 824            | 2.51        | 0.76         | 4.38      |
| 894            | 2.62        | 0.80         | 4.20      |
| 900            | 2.63        | 0.80         | 4.18      |
| 925            | 2.67        | 0.82         | 4.12      |
| 960            | 2.73        | 0.83         | 4.03      |
| 1000           | 2.79        | 0.85         | 3.94      |
| 1250           | 3.16        | 0.96         | 3.48      |
| 1400           | 3.37        | 1.03         | 3.26      |
| 1500           | 3.50        | 1.07         | 3.14      |
| 1900           | 4           | 1.22         | 2.75      |
| 2000           | 4.12        | 1.26         | 2.67      |
| 2100           | 4.24        | 1.29         | 2.59      |
| 2200           | 4.35        | 1.33         | 2.53      |
| 2500           | 4.69        | 1.43         | 2.34      |
| 2600           | 4.80        | 1.46         | 2.29      |
| 2700           | 4.90        | 1.49         | 2.24      |
| 3000           | 5.21        | 1.59         | 2.11      |

**LCFS114-50CPR**

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

|      |      |      |      |
|------|------|------|------|
| 3300 | 5.51 | 1.68 | 2    |
| 3600 | 5.80 | 1.77 | 1.90 |
| 3700 | 5.90 | 1.80 | 1.86 |

## External Document Links

[Web URL to CPR resources with DoP and CE-label download folders](#)

## Notes