

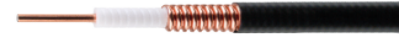


## 1/2" CELLFLEX® Superflexible Foam-Dielectric Coaxial Cable

## Product Description

CELLFLEX® 1/2" superflexible cable

Application: OEM jumpers, Main feed transitions to equipment, GPS lines



1/2" CELLFLEX® Superflexible Foam Dielectric Coaxial 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 RF/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

|                  |                           |           |              |
|------------------|---------------------------|-----------|--------------|
| Inner conductor: | Copper-Clad Aluminum Wire | [mm (in)] | 3.56 (0.14)  |
| Dielectric:      | Foam Polyethylene         | [mm (in)] | 9.3 (0.366)  |
| Outer conductor: | Corrugated Copper         | [mm (in)] | 12.3 (0.48)  |
| Jacket:          | Polyethylene, PE          | [mm (in)] | 13.75 (0.54) |

### Mechanical Properties

|  |                |                   |
|--|----------------|-------------------|
| Weight, approximately                    | [kg/m (lb/ft)] | 0.17 (0.11)       |
| Minimum bending radius, single bending   | [mm (in)]      |                   |
| Minimum bending radius, repeated bending | [mm (in)]      | 32 (1.3)          |
| Bending moment                           | [Nm (lb-ft)]   | 1.8 (1.33)        |
| Max. tensile force                       | [N (lb)]       | 650 (146)         |
| Recommended / maximum clamp spacing      | [m (ft)]       | 0.3 / 0.3 (1 / 1) |

### Electrical Properties

|                               |                   |               |
|-------------------------------|-------------------|---------------|
| Characteristic impedance      | [Ω]               | 50 +/- 1      |
| Relative propagation velocity | [%]               | 77            |
| Capacitance                   | [pF/m (pF/ft)]    | 86 (26)       |
| Inductance                    | [μH/m (μH/ft)]    | 0.215 (0.066) |
| Max. operating frequency      | [GHz]             | 10.6          |
| Jacket spark test RMS         | [V]               | 5000          |
| Peak power rating             | [kW]              | 24            |
| RF Peak voltage rating        | [V]               | 1550          |
| DC-resistance inner conductor | [Ω/km (Ω/1000ft)] | 2.9 (0.88)    |
| DC-resistance outer conductor | [Ω/km (Ω/1000ft)] | 4.5 (1.37)    |

### Recommended Temperature Range

|                          |           |                        |
|--------------------------|-----------|------------------------|
| Storage temperature      | [°C (°F)] | -70 to 85 (-94 to 185) |
| Installation temperature | [°C (°F)] | -40 to 60 (-40 to 140) |
| Operation temperature    | [°C (°F)] | -50 to 85 (-58 to 185) |

### Other Characteristics

Fire Performance: Halogene Free

VSWR Performance: Premium for 698 - 794, 824 - 960, 1710 - 1755, 1850 - 1990, 2110 - 2155 MHz [dB (VSWR)] 24 (1.135)

Other Options: Phase stabilized and phase matched cables and assemblies are available upon request.

| Frequency<br>[ MHz ] | Attenuation |              | Power<br>[ kW ] |
|----------------------|-------------|--------------|-----------------|
|                      | [ dB/100m ] | [ dB/100ft ] |                 |
| 0.5                  | 0.221       | 0.0673       | 24.0            |
| 1.0                  | 0.312       | 0.0952       | 22.6            |
| 1.5                  | 0.383       | 0.117        | 18.4            |
| 2.0                  | 0.442       | 0.135        | 16.0            |
| 10                   | 0.995       | 0.303        | 7.10            |
| 20                   | 1.41        | 0.430        | 5.01            |
| 30                   | 1.73        | 0.529        | 4.08            |
| 50                   | 2.25        | 0.686        | 3.14            |
| 88                   | 3.01        | 0.916        | 2.35            |
| 100                  | 3.21        | 0.978        | 2.20            |
| 108                  | 3.34        | 1.02         | 2.11            |
| 150                  | 3.96        | 1.21         | 1.78            |
| 174                  | 4.27        | 1.30         | 1.65            |
| 200                  | 4.60        | 1.40         | 1.53            |
| 300                  | 5.68        | 1.73         | 1.24            |
| 400                  | 6.61        | 2.01         | 1.07            |
| 450                  | 7.04        | 2.14         | 1.00            |
| 500                  | 7.44        | 2.27         | 0.949           |
| 512                  | 7.53        | 2.30         | 0.938           |
| 600                  | 8.20        | 2.50         | 0.861           |
| 700                  | 8.91        | 2.71         | 0.792           |
| 750                  | 9.24        | 2.82         | 0.764           |
| 800                  | 9.57        | 2.92         | 0.738           |
| 824                  | 9.72        | 2.96         | 0.726           |
| 894                  | 10.2        | 3.10         | 0.692           |
| 900                  | 10.2        | 3.11         | 0.692           |
| 925                  | 10.4        | 3.16         | 0.679           |
| 960                  | 10.6        | 3.22         | 0.666           |
| 1000                 | 10.8        | 3.29         | 0.654           |
| 1250                 | 12.2        | 3.72         | 0.579           |
| 1400                 | 13.0        | 3.96         | 0.543           |
| 1500                 | 13.5        | 4.11         | 0.523           |
| 1700                 | 14.5        | 4.41         | 0.487           |
| 1800                 | 14.9        | 4.55         | 0.474           |
| 2000                 | 15.8        | 4.82         | 0.447           |
| 2100                 | 16.3        | 4.96         | 0.433           |
| 2200                 | 16.7        | 5.09         | 0.423           |
| 2400                 | 17.5        | 5.35         | 0.403           |
| 2500                 | 17.9        | 5.47         | 0.394           |
| 2600                 | 18.4        | 5.59         | 0.384           |
| 2700                 | 18.8        | 5.72         | 0.376           |
| 3000                 | 19.9        | 6.07         | 0.355           |
| 3500                 | 21.8        | 6.63         | 0.324           |
| 4000                 | 23.5        | 7.16         | 0.300           |
| 5000                 | 26.8        | 8.16         | 0.263           |
| 6000                 | 29.8        | 9.09         | 0.237           |
| 7000                 | 32.7        | 9.97         | 0.216           |
| 8000                 | 35.5        | 10.8         | 0.199           |
| 9000                 | 38.1        | 11.6         | 0.185           |
| 10000                | 40.6        | 12.4         | 0.174           |

Attenuation at 20°C (68°F) cable temperature  
 Mean power rating at 40°C (104°F) ambient temperature