

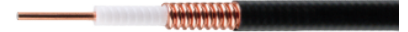


1/2" CELLFLEX® Superflexible Foam-Dielectric Coaxial Cable

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 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

| | | | |
|------------------|---------------------------|-----------|--------------|
| 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)] | 0.30 / 0.30 (1.00 / 1.00) |

Electrical Properties

| | | |
|-------------------------------|-------------------|---------------|
| Characteristic impedance | [Ω] | 50 +/- 1 |
| Relative propagation velocity | [%] | 77 |
| Capacitance | [pF/m (pF/ft)] | 86.0 (26.0) |
| 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] | 24.0 |
| 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: Standard

[dB (VSWR)]

Contact RFS for your VSWR performance specification for your required frequency band.

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

| Frequency [MHz] | Attenuation [dB/100m] [dB/100ft] | | Power [kW] |
|----------------------|---|--------|-----------------|
| 0.5 | 0.221 | 0.0673 | 24.0 |
| 1.0 | 0.312 | 0.0952 | 24.0 |
| 1.5 | 0.383 | 0.117 | 21.3 |
| 2.0 | 0.442 | 0.135 | 18.5 |
| 10 | 0.995 | 0.303 | 8.20 |
| 20 | 1.41 | 0.430 | 5.79 |
| 30 | 1.73 | 0.529 | 4.72 |
| 50 | 2.25 | 0.686 | 3.63 |
| 88 | 3.01 | 0.916 | 2.71 |
| 100 | 3.21 | 0.978 | 2.54 |
| 108 | 3.34 | 1.02 | 2.44 |
| 150 | 3.96 | 1.21 | 2.06 |
| 174 | 4.27 | 1.30 | 1.91 |
| 200 | 4.60 | 1.40 | 1.77 |
| 300 | 5.68 | 1.73 | 1.44 |
| 400 | 6.61 | 2.01 | 1.23 |
| 450 | 7.04 | 2.14 | 1.16 |
| 500 | 7.44 | 2.27 | 1.10 |
| 512 | 7.53 | 2.30 | 1.08 |
| 600 | 8.20 | 2.50 | 0.995 |
| 700 | 8.91 | 2.71 | 0.916 |
| 750 | 9.24 | 2.82 | 0.883 |
| 800 | 9.57 | 2.92 | 0.853 |
| 824 | 9.72 | 2.96 | 0.840 |
| 894 | 10.2 | 3.10 | 0.800 |
| 900 | 10.2 | 3.11 | 0.800 |
| 925 | 10.4 | 3.16 | 0.785 |
| 960 | 10.6 | 3.22 | 0.770 |
| 1000 | 10.8 | 3.29 | 0.756 |
| 1250 | 12.2 | 3.72 | 0.669 |
| 1400 | 13.0 | 3.96 | 0.628 |
| 1500 | 13.5 | 4.11 | 0.604 |
| 1700 | 14.5 | 4.41 | 0.563 |
| 1800 | 14.9 | 4.55 | 0.548 |
| 2000 | 15.8 | 4.82 | 0.516 |
| 2100 | 16.3 | 4.96 | 0.501 |
| 2200 | 16.7 | 5.09 | 0.489 |
| 2400 | 17.5 | 5.35 | 0.466 |
| 2500 | 17.9 | 5.47 | 0.456 |
| 2600 | 18.4 | 5.59 | 0.443 |
| 2700 | 18.8 | 5.72 | 0.434 |
| 3000 | 19.9 | 6.07 | 0.410 |
| 3500 | 21.8 | 6.63 | 0.374 |
| 4000 | 23.5 | 7.16 | 0.347 |
| 5000 | 26.8 | 8.16 | 0.304 |
| 6000 | 29.8 | 9.09 | 0.274 |
| 7000 | 32.7 | 9.97 | 0.250 |
| 8000 | 35.5 | 10.8 | 0.230 |
| 9000 | 38.1 | 11.6 | 0.214 |
| 10000 | 40.6 | 12.4 | 0.201 |

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