



3/8" CELLFLEX® Low-Loss Foam-Dielectric Coaxial Cable

Product Description

CELLFLEX® 3/8" low loss flexible cable

Application: OEM jumpers, BTS inter-cabinet connections, GPS lines, Microwave IF cabling



3/8" CELLFLEX® Low-Loss 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.

| Frequency [MHz] | Attenuation | | Power [kW] |
|-----------------|-------------|------------|------------|
| | [dB/100m] | [dB/100ft] | |
| 0.5 | 0.237 | 0.0724 | 15.4 |
| 1.0 | 0.336 | 0.102 | 15.4 |
| 1.5 | 0.412 | 0.125 | 15.4 |
| 2.0 | 0.476 | 0.145 | 15.2 |
| 10 | 1.07 | 0.325 | 6.79 |
| 20 | 1.51 | 0.461 | 4.79 |
| 30 | 1.86 | 0.566 | 3.90 |
| 50 | 2.41 | 0.734 | 3.01 |
| 88 | 3.21 | 0.978 | 2.26 |
| 100 | 3.43 | 1.04 | 2.12 |
| 108 | 3.56 | 1.09 | 2.04 |
| 150 | 4.21 | 1.28 | 1.72 |
| 174 | 4.55 | 1.39 | 1.59 |
| 200 | 4.89 | 1.49 | 1.48 |
| 300 | 6.02 | 1.84 | 1.20 |
| 400 | 7.00 | 2.13 | 1.04 |
| 450 | 7.44 | 2.27 | 0.975 |
| 500 | 7.86 | 2.40 | 0.923 |
| 512 | 7.96 | 2.43 | 0.911 |
| 600 | 8.65 | 2.64 | 0.838 |
| 700 | 9.38 | 2.86 | 0.773 |
| 800 | 10.1 | 3.07 | 0.720 |
| 824 | 10.2 | 3.12 | 0.709 |
| 894 | 10.7 | 3.25 | 0.679 |
| 900 | 10.7 | 3.27 | 0.677 |
| 925 | 10.9 | 3.31 | 0.667 |
| 960 | 11.1 | 3.38 | 0.654 |
| 1000 | 11.3 | 3.45 | 0.640 |
| 1250 | 12.8 | 3.89 | 0.568 |
| 1500 | 14.1 | 4.29 | 0.515 |
| 1700 | 15.1 | 4.59 | 0.481 |
| 1800 | 15.5 | 4.74 | 0.467 |
| 2000 | 16.5 | 5.01 | 0.441 |
| 2100 | 16.9 | 5.15 | 0.429 |
| 2200 | 17.3 | 5.28 | 0.418 |
| 2400 | 18.2 | 5.54 | 0.399 |
| 3000 | 20.5 | 6.26 | 0.353 |
| 3500 | 22.4 | 6.82 | 0.324 |
| 4000 | 24.1 | 7.35 | 0.301 |
| 5000 | 27.4 | 8.34 | 0.265 |
| 6000 | 30.3 | 9.25 | 0.239 |
| 7000 | 33.2 | 10.1 | 0.219 |
| 8000 | 35.8 | 10.9 | 0.202 |
| 9000 | 38.4 | 11.7 | 0.189 |
| 10000 | 40.8 | 12.4 | 0.178 |
| 12000 | 45.5 | 13.9 | 0.159 |
| 13500 | 48.8 | 14.9 | 0.149 |

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

Technical Features

Structure

| | | | |
|------------------|---------------------------|-----------|-------------|
| Inner conductor: | Copper-Clad Aluminum Wire | [mm (in)] | 3.1 (0.12) |
| Dielectric: | Foam Polyethylene | [mm (in)] | 7.2 (0.28) |
| Outer conductor: | Corrugated Copper | [mm (in)] | 9.5 (0.37) |
| Jacket: | Polyethylene, PE | [mm (in)] | 11.2 (0.44) |

Mechanical Properties

| | | |
|--|----------------|-----------------------|
| Weight, approximately | [kg/m (lb/ft)] | 0.12 (0.08) |
| Minimum bending radius, single bending | [mm (in)] | 50 (2) |
| Minimum bending radius, repeated bending | [mm (in)] | 95 (4) |
| Bending moment | [Nm (lb-ft)] | 1.9 (1.4) |
| Max. tensile force | [N (lb)] | 530 (119) |
| Recommended / maximum clamp spacing | [m (ft)] | 0.5 / 1 (1.75 / 3.25) |

Electrical Properties

| | | |
|-------------------------------|-------------------|--------------|
| Characteristic impedance | [Ω] | 50 +/- 1.5 |
| Relative propagation velocity | [%] | 88 |
| Capacitance | [pF/m (pF/ft)] | 76 (23.2) |
| Inductance | [μH/m (μH/ft)] | 0.19 (0.058) |
| Max. operating frequency | [GHz] | 13.5 |
| Jacket spark test RMS | [V] | 5000 |
| Peak power rating | [kW] | 15.4 |
| RF Peak voltage rating | [V] | 1240 |
| DC-resistance inner conductor | [Ω/km (Ω/1000ft)] | 3.8 (1.16) |
| DC-resistance outer conductor | [Ω/km (Ω/1000ft)] | 2.9 (0.88) |

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

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.

All information contained in the present datasheet is subject to confirmation at time of ordering