



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

Product Description

CELLFLEX®1-1/4" premium attenuation low loss flexible cable

Application: Main feed line



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

Features/Benefits

- Ultra Low Attenuation**
The further reduced attenuation of CELLFLEX® premium attenuation coaxial cable results in extremely efficient signal transfer in your RF system, especially at high frequencies.
- 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 Tube | [mm (in)] | 13.1 (0.52) |
| Dielectric: | Foam Polyethylene | [mm (in)] | 32.7 (1.29) |
| Outer conductor: | Corrugated Copper | [mm (in)] | 35.9 (1.41) |
| Jacket: | Polyethylene, PE | [mm (in)] | 39 (1.54) |

Mechanical Properties

| | | |
|--|----------------|--------------------|
| Weight, approximately | [kg/m (lb/ft)] | 0.86 (0.58) |
| Minimum bending radius, single bending | [mm (in)] | 200 (8) |
| Minimum bending radius, repeated bending | [mm (in)] | 380 (15) |
| Bending moment | [Nm (lb-ft)] | 43 (32) |
| Max. tensile force | [N (lb)] | 2490 (560) |
| Recommended / maximum clamp spacing | [m (ft)] | 1 / 1.2 (3.25 / 4) |

Electrical Properties

| | | |
|-------------------------------|-------------------|---------------|
| Characteristic impedance | [Ω] | 50 +/- 1 |
| Relative propagation velocity | [%] | 89 |
| Capacitance | [pF/m (pF/ft)] | 75 (22.9) |
| Inductance | [μH/m (μH/ft)] | 0.188 (0.057) |
| Max. operating frequency | [GHz] | 3.6 |
| Jacket spark test RMS | [V] | 10000 |
| Peak power rating | [kW] | 176 |
| RF Peak voltage rating | [V] | 4200 |
| DC-resistance inner conductor | [Ω/km (Ω/1000ft)] | 0.83 (0.25) |
| DC-resistance outer conductor | [Ω/km (Ω/1000ft)] | 0.73 (0.22) |

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 24 (1.135)
 Other Options: Phase stabilized and phase matched cables and assemblies are available upon request.

| Frequency [MHz] | Attenuation | | Power [kW] |
|----------------------|-------------|--------------|-----------------|
| | [dB/100m] | [dB/100ft] | |
| 0.5 | 0.0558 | 0.0170 | 176 |
| 1.0 | 0.0790 | 0.0241 | 139 |
| 1.5 | 0.0969 | 0.0295 | 113 |
| 2.0 | 0.112 | 0.0341 | 98.2 |
| 10 | 0.252 | 0.0768 | 43.6 |
| 20 | 0.358 | 0.109 | 30.7 |
| 30 | 0.440 | 0.134 | 25.0 |
| 50 | 0.572 | 0.174 | 19.2 |
| 88 | 0.765 | 0.233 | 14.4 |
| 100 | 0.817 | 0.249 | 13.5 |
| 108 | 0.851 | 0.259 | 12.9 |
| 150 | 1.01 | 0.308 | 10.9 |
| 174 | 1.09 | 0.332 | 10.1 |
| 200 | 1.17 | 0.358 | 9.40 |
| 300 | 1.45 | 0.443 | 7.58 |
| 400 | 1.69 | 0.517 | 6.50 |
| 450 | 1.81 | 0.550 | 6.07 |
| 500 | 1.91 | 0.582 | 5.76 |
| 512 | 1.94 | 0.590 | 5.67 |
| 600 | 2.11 | 0.643 | 5.21 |
| 700 | 2.29 | 0.699 | 4.80 |
| 750 | 2.38 | 0.726 | 4.62 |
| 800 | 2.47 | 0.752 | 4.45 |
| 824 | 2.51 | 0.764 | 4.38 |
| 894 | 2.62 | 0.799 | 4.20 |
| 900 | 2.63 | 0.802 | 4.18 |
| 925 | 2.67 | 0.815 | 4.12 |
| 960 | 2.73 | 0.831 | 4.03 |
| 1000 | 2.79 | 0.850 | 3.94 |
| 1250 | 3.16 | 0.963 | 3.48 |
| 1400 | 3.37 | 1.03 | 3.26 |
| 1500 | 3.50 | 1.07 | 3.14 |
| 1900 | 4.0 | 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 |
| 3300 | 5.51 | 1.68 | 2.00 |
| 3600 | 5.80 | 1.77 | 1.90 |
| 3700 | 5.90 | 1.80 | 1.86 |
| 3800 | 5.99 | 1.83 | 1.84 |

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

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