



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

CELLFLEX® 1/2" superflexible cable; flame retardant/ halogen free jacket CPR rated

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.



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Technical Features

APPLICATIONS

| | |
|--------------|-----------------------------------------------------------------------------------------------------------|
| Applications | OEM jumpers, Main feed transitions to equipment, GPS lines, Riser-rated In-Building, CPR classified cable |
|--------------|-----------------------------------------------------------------------------------------------------------|

STRUCTURE

| | | |
|-----------------|---------|-------------------------------------------------------|
| Cable Type | | Foam-Dielectric, Superflexible |
| Size | | 1/2" |
| Jacket Option | | Black |
| Inner Conductor | mm (in) | 3.56 (0.14) Copper-Clad Aluminum Wire |
| Dielectric | mm (in) | 9.3 (0.366) Foam Polyethylene |
| Outer Conductor | mm (in) | 12.3 (0.48) Corrugated Copper |
| Jacket | mm (in) | 13.75 (0.54) Polyethylene, PE, Metalhydroxite Filling |

ELECTRICAL SPECIFICATIONS

| | | |
|--------------------------------|----------------------|---------------------------------------------------------------------------------------------------------------------------|
| Impedance | Ω | 50 +/- 1 |
| Maximum Frequency | GHz | 10.6 |
| Velocity | % | 77.0 |
| Capacitance | pF/m (pF/ft) | 86 (26) |
| Inductance | μH/m (μH/ft) | 0.215 (0.066) |
| Peak Power Rating | kW | 24.0 |
| RF Peak Voltage | Volts | 1550.0 |
| Jacket Spark | Volt RMS | 5000.0 |
| Inner Conductor dc Resistance | Ω/1000 m (Ω/1000 ft) | 2.9 (0.88) |
| Outer Conductor dc Resistance | Ω/1000 m (Ω/1000 ft) | 5.3 (1.62) |
| Return Loss (VSWR) Performance | | Premium for 380-410, 694-960, 1695-2200, 2400-2496, 3500 MHz Standard for 500-694, 1452-1496, 2300-2400, 2496-2700 MHz |
| Maximum Return Loss | dB (VSWR) | Premium: 24 (1.135) and Standard: 20 (1.222) |
| Phase Stabilized | | Phase stabilized and phase matched cables and assemblies are available upon request. |
| Temperature & Power | | Standard |

MECHANICAL SPECIFICATIONS

| | | |
|----------------------------------------|--------------|----------------------|
| Cable Weight | kg/m (lb/ft) | 0.18 (0.12) |
| Minimum Bending Radius, Repeated Bends | mm (in) | 32 (1.3) |
| Bending Moment | Nm (lb*ft) | 1.8 |
| Tensile Strength | N (lb) | 650 (146) |
| Recommended / Maximum Clamp Spacing | m (ft) | 0.3 / 0.5 (1 / 1.64) |



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ATTENUATION AND POWER RATING

| Frequency MHz | Attenuation | | Power kW |
|------------------|-------------|----------|-------------|
| | dB/100m | dB/100ft | |
| 0.5 | 0.22 | 0.067 | 24.00 |
| 1 | 0.31 | 0.095 | 22.60 |
| 1.5 | 0.38 | 0.117 | 18.40 |
| 2 | 0.44 | 0.135 | 16.00 |
| 10 | 0.99 | 0.303 | 7.10 |
| 20 | 1.41 | 0.43 | 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 | 10.20 | 3.10 | 0.692 |
| 900 | 10.20 | 3.11 | 0.692 |
| 925 | 10.40 | 3.16 | 0.679 |
| 960 | 10.60 | 3.22 | 0.666 |
| 1000 | 10.80 | 3.29 | 0.654 |
| 1250 | 12.20 | 3.72 | 0.579 |
| 1400 | 13.00 | 3.96 | 0.543 |
| 1500 | 13.50 | 4.11 | 0.523 |
| 1700 | 14.50 | 4.41 | 0.487 |
| 1800 | 14.90 | 4.55 | 0.474 |
| 2000 | 15.80 | 4.82 | 0.447 |
| 2100 | 16.30 | 4.96 | 0.433 |
| 2200 | 16.70 | 5.09 | 0.423 |
| 2400 | 17.50 | 5.35 | 0.403 |
| 2500 | 17.90 | 5.47 | 0.394 |
| 2600 | 18.40 | 5.59 | 0.384 |
| 2700 | 18.80 | 5.72 | 0.376 |
| 3000 | 19.90 | 6.07 | 0.355 |
| 3500 | 21.80 | 6.63 | 0.324 |
| 4000 | 23.50 | 7.16 | 0.30 |
| 5000 | 26.80 | 8.16 | 0.263 |
| 6000 | 29.80 | 9.09 | 0.237 |
| 7000 | 32.70 | 9.97 | 0.216 |
| 8000 | 35.50 | 10.80 | 0.199 |
| 9000 | 38.10 | 11.60 | 0.185 |
| 10000 | 40.60 | 12.40 | 0.174 |

Attenuation at 20°C (68°F) cable temperature;
tolerance +/- 5% max.; Mean power rating at
40°C (104°F) ambient temperature

TESTING AND ENVIRONMENTAL

| | |
|----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Fire Performance | Flame Retardant, LS0H |
| Flame Retardant Jacket Specifications | Meets/Exceeds: IEC 60754-1, -2; IEC 60332-1, -3.C; UL 1581; UL 1666; NEC type CATVR; CPR: EN50575:2017 class B2ca s1 do a1 |
| Installation Temperature | -15 to 60 (5 to 140) °C(°F) |
| Storage Temperature | -70 to 85 (-94 to 185) °C(°F) |
| Operation Temperature | -50 to 85 (-58 to 185) °C(°F) |

External Document Links

Web URL to CPR resources with DoP
and CE-label download folders

Notes

Phase stabilized versions available upon request.