



CELLFLEX® Lite 1/2" low loss flexible 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.

• **Meets or Exceeds: IEC 60754-1, -2; IEC 60332-1-1, -2; IEC 61034-1, -2; IEC 60332-3-24 (formerly IEC 60332-3-C)**



1/2" CELLFLEX® Lite Low-Loss Foam Dielectric Coaxial Cable

Technical features

APPLICATIONS

| Applications | Indoor | Wireless Communication | HF Defense | Microwave | Mobile Radio | Cable Solutions |
|--------------|--------|------------------------|------------|-----------|--------------|-----------------|
| | | | | | | |

STRUCTURE

| | | |
|--------------------------|---------|--|
| Size | | 1/2 |
| Jacket Option | | Black |
| Inner Conductor | mm (in) | 4.8 (0.19) |
| Inner Conductor Material | | Copper-Clad Aluminum Wire |
| Dielectric | mm (in) | 11.3 (0.44) |
| Dielectric Material | | Foam Polyethylene |
| Outer Conductor | mm (in) | 13.8 (0.54) |
| Outer Conductor Material | | Corrugated Aluminum |
| Jacket | mm (in) | 15.9 (0.62) |
| Jacket Material | | Polyethylene, PE, Metalhydroxite Filling |
| Cable Type | | Foam-Dielectric, Corrugated |

TESTING AND ENVIRONMENTAL

| | | |
|---------------------------------------|---------|---|
| Fire Performance | | Flame Retardant, LSOH |
| Flame Retardant Jacket Specifications | | Meets/Exceeds: IEC 60754-1, -2; IEC 60332-1, -3.C; UL 1581; UL 1666; NEC type CATVR |
| Installation Temperature | °C(°F) | -25 to 60 (-13 to 140) |
| Storage Temperature | °C (°F) | -70 to 85 (-94 to 185) |
| Operation Temperature | °C(°F) | -50 to 85 (-58 to 185) |



ELECTRICAL SPECIFICATIONS

| | | |
|--------------------------------|-------------------------|--|
| Impedance | Ω | 50 +/- 1 |
| Maximum Frequency | GHz | 8.8 |
| Velocity | % | 87 |
| Capacitance | pF/m (pF/ft) | 76 (23.2) |
| Inductance | uH/m (uH/ft) | 0.19 (0.058) |
| Peak Power Rating | kW | 38 |
| RF Peak Voltage | Volts | 1950 |
| Jacket Spark | Volt RMS | 8000 |
| Inner Conductor dc Resistance | Ω/1000 m (Ω/1000 ft) | 1.6 (0.49) |
| Outer Conductor dc Resistance | Ω/1000 m (Ω/1000 ft) | 2.8 (0.85) |
| Return Loss (VSWR) Performance | | Standard (for 40-2700, 3300-4200, 4400-5925 MHz) or Premium |
| Min. Return Loss (Max. VSWR) | dB (VSWR) | Standard 20 (1.222), Premium 24 (1.135)/ 23 (1.152) |
| Phase Stabilized | | Phase stabilized and phase matched cables and assemblies are available upon request. |
| Temperature & Power | | Standard |

MECHANICAL SPECIFICATIONS

| | | |
|--|--------------|--------------------|
| Cable Weight, Nominal | kg/m (lb/ft) | 0.19 (0.12) |
| Minimum Bending Radius, Single Bend | mm (in) | 70 (3) |
| Minimum Bending Radius, Repeated Bends | mm (in) | 125 (5) |
| Bending Moment | Nm (lb-ft) | 6.5 (4.8) |
| Tensile Strength | N (lb) | 800 (180) |
| Recommended / Maximum Clamp Spacing | m (ft) | 0.6 / 1 (2 / 3.25) |



ATTENUATION @ 20°C (68°F) AND POWER RATING @ 40°C (104°F)

| Frequency, MHz | dB per 100m | dB per 100ft | Power, kW |
|----------------|-------------|--------------|-----------|
| 1 | 0.23 | 0.07 | 38 |
| 1.5 | 0.29 | 0.09 | 31.20 |
| 2 | 0.33 | 0.10 | 27.10 |
| 10 | 0.74 | 0.23 | 12 |
| 20 | 1.05 | 0.32 | 8.48 |
| 30 | 1.29 | 0.39 | 6.90 |
| 50 | 1.66 | 0.51 | 5.36 |
| 88 | 2.22 | 0.68 | 4.01 |
| 100 | 2.37 | 0.72 | 3.76 |
| 108 | 2.46 | 0.75 | 3.62 |
| 150 | 2.91 | 0.89 | 3.06 |
| 174 | 3.14 | 0.96 | 2.83 |
| 200 | 3.38 | 1.03 | 2.63 |
| 300 | 4.16 | 1.27 | 2.14 |
| 400 | 4.83 | 1.47 | 1.84 |
| 450 | 5.13 | 1.57 | 1.73 |
| 500 | 5.42 | 1.65 | 1.64 |
| 512 | 5.49 | 1.67 | 1.62 |
| 600 | 5.97 | 1.82 | 1.49 |
| 700 | 6.47 | 1.97 | 1.38 |
| 750 | 6.71 | 2.04 | 1.33 |
| 800 | 6.94 | 2.12 | 1.28 |
| 824 | 7.05 | 2.15 | 1.26 |
| 894 | 7.36 | 2.24 | 1.21 |
| 900 | 7.39 | 2.25 | 1.20 |
| 925 | 7.49 | 2.28 | 1.19 |
| 960 | 7.64 | 2.33 | 1.16 |
| 1000 | 7.81 | 2.38 | 1.14 |
| 1250 | 8.79 | 2.68 | 1.01 |
| 1400 | 9.34 | 2.85 | 0.95 |
| 1500 | 9.69 | 2.95 | 0.92 |
| 1700 | 10.40 | 3.16 | 0.86 |
| 1800 | 10.70 | 3.26 | 0.83 |
| 2000 | 11.30 | 3.45 | 0.79 |
| 2100 | 11.60 | 3.54 | 0.77 |
| 2200 | 11.90 | 3.63 | 0.75 |
| 2400 | 12.50 | 3.81 | 0.71 |
| 2500 | 12.80 | 3.89 | 0.70 |
| 2600 | 13.10 | 3.98 | 0.68 |
| 2700 | 13.30 | 4.06 | 0.67 |



| | | | |
|-------|-------|------|------|
| 3000 | 14.10 | 4.30 | 0.63 |
| 3500 | 15.40 | 4.69 | 0.58 |
| 4000 | 16.60 | 5.05 | 0.54 |
| 5000 | 18.80 | 5.72 | 0.47 |
| 6000 | 20.80 | 6.34 | 0.43 |
| 7000 | 22.70 | 6.92 | 0.39 |
| 8000 | 24.50 | 7.47 | 0.36 |
| 9000 | 26.20 | 8 | 0.34 |
| 10000 | 27.90 | 8.50 | 0.32 |
| 11700 | 30.60 | 9.33 | 0.29 |

External Document Links

Notes

Phase stabilized versions available upon request.
Phase stabilized versions available upon request.