



CELLFLEX® 1/4" superflexible cable; flame retardant/ halogen free jacket

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)**



1/4" CELLFLEX® Superflexible Foam Dielectric Coaxial Cable

Technical features

APPLICATIONS

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

STRUCTURE

| | | |
|--------------------------|---------|------------------------------------------|
| Size | | 1/4 |
| Jacket Option | | Black |
| Inner Conductor | mm (in) | 1.9 (0.075) |
| Inner Conductor Material | | Copper-Clad Aluminum Wire |
| Dielectric | mm (in) | 4.3 (0.17) |
| Dielectric Material | | Foam Polyethylene |
| Outer Conductor | mm (in) | 6.5 (0.26) |
| Outer Conductor Material | | Corrugated Copper |
| Jacket | mm (in) | 7.8 (0.31) |
| Jacket Material | | Polyethylene, PE, Metalhydroxite Filling |
| Cable Type | | Foam-Dielectric, Superflexible |

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; EN45545-2(GER production) |
| 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, Ohm | Ω | 50 +/- 1 |
| Maximum Frequency | GHz | 20.4 |
| Velocity, percent | % | 81 |
| Capacitance | pF/m (pF/ft) | 82 (25) |
| Inductance, uH/m (uH/ft) | μH/m (μH/ft) | 0.207 (0.063) |
| Peak Power Rating | kW | 5.5 |
| RF Peak Voltage | Volts | 740 |
| Jacket Spark | Volt RMS | 5000 |
| Inner Conductor dc Resistance, Ω/km (Ω/kft) | Ω/1000 m (Ω/1000 ft) | 10.5 (3.19) |
| Outer Conductor dc Resistance, ohm/1000 m (Ohm/1000 ft) | Ω/1000 m (Ω/1000 ft) | 9 (2.74) |
| Return Loss (VSWR) Performance | | Standard for 40-2700, 3300-4200, 4400-5925 MHz, Premium according to B-Class |
| 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) | 0.07 (0.05) |
| Minimum Bending Radius, Repeated Bends | mm (in) | 25 (1) |
| Bending Moment, Nm (lb-ft) | Nm (lb*ft) | 0.7 (0.5) |
| Tensile Strength | N (lb) | 600 (135) |
| Recommended / Maximum Clamp Spacing | m (ft) | 0.2 / 0.2 (0.67 / 0.67) |



ATTENUATION AND POWER RATING

| Frequency, MHz | dB per 100m | dB per 100ft | Power, kW |
|----------------|-------------|--------------|-----------|
| 0.5 | 0.40 | 0.12 | 5.50 |
| 1 | 0.57 | 0.17 | 5.50 |
| 1.5 | 0.70 | 0.21 | 5.50 |
| 2 | 0.80 | 0.25 | 5.50 |
| 10 | 1.81 | 0.55 | 3.66 |
| 20 | 2.56 | 0.78 | 2.58 |
| 30 | 3.15 | 0.96 | 2.10 |
| 50 | 4.08 | 1.24 | 1.62 |
| 88 | 5.45 | 1.66 | 1.21 |
| 100 | 5.82 | 1.77 | 1.14 |
| 108 | 6.06 | 1.85 | 1.09 |
| 150 | 7.17 | 2.19 | 0.92 |
| 174 | 7.75 | 2.36 | 0.85 |
| 200 | 8.33 | 2.54 | 0.79 |
| 300 | 10.30 | 3.13 | 0.64 |
| 400 | 12 | 3.65 | 0.55 |
| 450 | 12.70 | 3.88 | 0.52 |
| 500 | 13.50 | 4.10 | 0.49 |
| 512 | 13.60 | 4.15 | 0.49 |
| 600 | 14.80 | 4.52 | 0.45 |
| 700 | 16.10 | 4.91 | 0.41 |
| 800 | 17.30 | 5.27 | 0.38 |
| 824 | 17.60 | 5.35 | 0.38 |
| 894 | 18.40 | 5.59 | 0.36 |
| 900 | 18.40 | 5.61 | 0.36 |
| 925 | 18.70 | 5.70 | 0.35 |
| 960 | 19.10 | 5.81 | 0.35 |
| 1000 | 19.50 | 5.94 | 0.34 |
| 1250 | 22 | 6.71 | 0.30 |
| 1500 | 24.30 | 7.41 | 0.27 |
| 1700 | 26.10 | 7.94 | 0.25 |
| 1800 | 26.90 | 8.20 | 0.25 |
| 2000 | 28.50 | 8.69 | 0.23 |
| 2100 | 29.30 | 8.93 | 0.23 |
| 2200 | 30.10 | 9.20 | 0.22 |
| 2400 | 31.60 | 9.60 | 0.21 |
| 3000 | 35.80 | 10.90 | 0.19 |
| 3500 | 39.10 | 11.90 | 0.17 |
| 4000 | 42.20 | 12.90 | 0.16 |
| 5000 | 48 | 14.60 | 0.14 |



| | | | |
|-------|-------|-------|------|
| 6000 | 53.40 | 16.30 | 0.12 |
| 7000 | 58.60 | 17.80 | 0.11 |
| 8000 | 63.40 | 19.30 | 0.10 |
| 9000 | 68.10 | 20.80 | 0.10 |
| 10000 | 72.60 | 22.10 | 0.09 |
| 12000 | 81 | 24.80 | 0.08 |
| 14000 | 89 | 27.20 | 0.07 |
| 16000 | 97 | 29.60 | 0.07 |
| 18000 | 105 | 31.90 | 0.06 |
| 20000 | 112 | 34.20 | 0.06 |
| 20400 | 113 | 34.60 | 0.06 |

External Document Links

Notes

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