



CELLFLEX®1-5/8" premium attenuation low loss flexible cable support CBRS, C-Band up to 3.98GHz; flame retardant / hologen free jacket.

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 Technologies 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)**



1-5/8" CELLFLEX® Low-Loss Foam Dielectric Coaxial Cable

Technical features

APPLICATIONS

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

STRUCTURE

| | | |
|--------------------------|---------|--|
| Size | | 1-5/8 |
| Jacket Option | | Black, Radiation resistant |
| Inner Conductor Diameter | mm (in) | 17.6 (0.69) |
| Inner Conductor Material | | Corrugated Copper Tube |
| Dielectric Diameter | mm (in) | 42.4 (1.67) |
| Dielectric Material | | Foam Polyethylene |
| Outer Conductor Diameter | mm (in) | 46.4 (1.83) |
| Outer Conductor Material | | Corrugated Copper |
| Jacket Diameter | mm (in) | 50.2 (1.98) |
| 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 60332-1-1, -2; IEC 61034-1, -2; IEC 60332-3-24 (formerly IEC 60332-3-C); UL 1581; UL 1666; NFPA130 (ed. 2014) Ch.12 (NFPA70) via UL-1685/FT4/IEEE1202; NEC type CATVR; CPR: https://products.rfsworld.com/userfiles/cpr/rfs-products-cpr-compliance.pdf |
| 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 | 2.75 |
| Velocity | % | 90 |
| Capacitance | pF/m (pF/ft) | 74 (22.5) |
| Inductance | uH/m (uH/ft) | 0.185 (0.056) |
| Peak Power Rating | kW | 310 |
| RF Peak Voltage | Volts | 5600 |
| Jacket Spark | Volt RMS | 10000 |
| Inner Conductor dc Resistance | Ω/1000 m (Ω/1000 ft) | 1.3 (0.4) |
| Outer Conductor dc Resistance | Ω/1000 m (Ω/1000 ft) | 0.47 (0.14) |
| Return Loss (VSWR) Performance | | 20 (1.22) @ 450-617 MHz 24 (1.13) @ 617-960 MHz 24 (1.13) @ 1695-2200 MHz 20 (1.22) @ 2300-2700 MHz 12 (1.67) @ 3500-3980 MHz |
| 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) | 1.25 (0.84) |
| Minimum Bending Radius, Single Bend | mm (in) | 200 (8) |
| Minimum Bending Radius, Repeated Bends | mm (in) | 500 (20) |
| Bending Moment | Nm (lb-ft) | 42 (31) |
| Tensile Strength | N (lb) | 2500 (562) |
| Recommended / Maximum Clamp Spacing | m (ft) | 1.2 / 1.5 (4 / 5) |



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

| Frequency, MHz | dB per 100m | dB per 100ft | Power, kW |
|----------------|-------------|--------------|-----------|
| 0.5 | 0.04 | 0.01 | 258 |
| 1 | 0.06 | 0.02 | 182 |
| 1.5 | 0.08 | 0.02 | 148 |
| 2 | 0.09 | 0.03 | 128 |
| 10 | 0.20 | 0.06 | 56.90 |
| 20 | 0.28 | 0.09 | 39.90 |
| 30 | 0.35 | 0.11 | 32.50 |
| 50 | 0.45 | 0.14 | 25 |
| 88 | 0.60 | 0.18 | 18.60 |
| 100 | 0.64 | 0.20 | 17.40 |
| 108 | 0.67 | 0.21 | 16.70 |
| 150 | 0.80 | 0.24 | 14 |
| 174 | 0.86 | 0.26 | 13 |
| 200 | 0.93 | 0.28 | 12.10 |
| 300 | 1.16 | 0.35 | 9.66 |
| 400 | 1.35 | 0.41 | 8.30 |
| 450 | 1.44 | 0.44 | 7.78 |
| 500 | 1.53 | 0.47 | 7.33 |
| 512 | 1.55 | 0.47 | 7.23 |
| 600 | 1.69 | 0.52 | 6.63 |
| 700 | 1.84 | 0.56 | 6.09 |
| 750 | 1.91 | 0.58 | 5.87 |
| 800 | 1.98 | 0.60 | 5.66 |
| 824 | 2.02 | 0.62 | 5.55 |
| 894 | 2.11 | 0.64 | 5.31 |
| 900 | 2.12 | 0.65 | 5.29 |
| 925 | 2.15 | 0.66 | 5.21 |
| 960 | 2.20 | 0.67 | 5.10 |
| 1000 | 2.25 | 0.69 | 4.98 |
| 1250 | 2.56 | 0.78 | 4.38 |
| 1400 | 2.73 | 0.83 | 4.11 |
| 1500 | 2.84 | 0.87 | 3.95 |
| 1700 | 3.06 | 0.93 | 3.66 |
| 1800 | 3.16 | 0.96 | 3.55 |
| 2000 | 3.36 | 1.03 | 3.34 |
| 2100 | 3.46 | 1.06 | 3.24 |



| | | | |
|-------------|------|------|------|
| 2200 | 3.56 | 1.08 | 3.15 |
| 2400 | 3.75 | 1.14 | 2.99 |
| 2500 | 3.84 | 1.17 | 2.92 |
| 2600 | 3.93 | 1.20 | 2.85 |
| 2700 | 4.02 | 1.23 | 2.79 |
| 2750 | 4.07 | 1.24 | 2.75 |

External Document Links

Notes