



CELLFLEX® 1-1/4" premium attenuation low loss Ultraflexible cable support CBRS, C-Band up to 4.1GHz; flame retardant/ halogen 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 RF/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.



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

Technical features

APPLICATIONS

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

STRUCTURE

| | | |
|--------------------------|---------|--|
| Size | | 1-1/4 |
| Jacket Option | | Black |
| Inner Conductor Diameter | mm (in) | 13.8 (0.55) |
| Inner Conductor Material | | Corrugated Copper Tube |
| Dielectric Diameter | mm (in) | 31 (1.22) |
| Dielectric Material | | Foam Polyethylene |
| Outer Conductor Diameter | mm (in) | 36 (1.42) |
| Outer Conductor Material | | Corrugated Copper |
| Jacket Diameter | mm (in) | 39 (1.54) |
| Jacket Material | | Polyethylene, PE, Metalhydroxite Filling |
| Cable Type | | Foam-Dielectric, Corrugated |



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;NFPA130; 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 | 3.3 |
| Velocity | % | 89 |
| Capacitance | pF/m (pF/ft) | 75 (22.9) |
| Inductance | uH/m (uH/ft) | 0.184 (0.056) |
| Peak Power Rating | kW | 178 |
| RF Peak Voltage | Volts | 4200 |
| Jacket Spark | Volt RMS | 10000 |
| Inner Conductor dc Resistance | Ω/1000 m (Ω/1000 ft) | 1.94 (0.59) |
| Outer Conductor dc Resistance | Ω/1000 m (Ω/1000 ft) | 0.55 (0.17) |
| 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 15 (1.43) @ 3500-4100 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) | 0.79 (0.53) |
| Minimum Bending Radius, Single Bend | mm (in) | 150 (6) |
| Minimum Bending Radius, Repeated Bends | mm (in) | 250 (10) |
| Bending Moment | Nm (lb-ft) | 36 (25.6) |
| Tensile Strength | N (lb) | 2900 (650) |
| Recommended / Maximum Clamp Spacing | m (ft) | 1 / 1.2 (3.25 / 4) |



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

| Frequency, MHz | dB per 100m | dB per 100ft | Power, kW |
|----------------|-------------|--------------|-----------|
| 0.5 | 0.06 | 0.02 | 178 |
| 1 | 0.08 | 0.03 | 131 |
| 1.5 | 0.10 | 0.03 | 107 |
| 2 | 0.12 | 0.04 | 92.30 |
| 10 | 0.27 | 0.08 | 41 |
| 20 | 0.38 | 0.12 | 28.80 |
| 30 | 0.47 | 0.14 | 23.40 |
| 50 | 0.61 | 0.19 | 18 |
| 88 | 0.82 | 0.25 | 13.50 |
| 100 | 0.88 | 0.27 | 12.60 |
| 108 | 0.91 | 0.28 | 12.10 |
| 150 | 1.09 | 0.33 | 10.20 |
| 174 | 1.17 | 0.36 | 9.42 |
| 200 | 1.26 | 0.39 | 8.75 |
| 300 | 1.57 | 0.48 | 7.05 |
| 400 | 1.83 | 0.56 | 6.04 |
| 450 | 1.95 | 0.59 | 5.67 |
| 500 | 2.06 | 0.63 | 5.35 |
| 512 | 2.09 | 0.64 | 5.29 |
| 600 | 2.28 | 0.70 | 4.85 |
| 700 | 2.48 | 0.76 | 4.45 |
| 800 | 2.67 | 0.82 | 4.14 |
| 824 | 2.72 | 0.83 | 4.07 |
| 894 | 2.84 | 0.87 | 3.89 |
| 900 | 2.85 | 0.87 | 3.87 |
| 925 | 2.90 | 0.88 | 3.81 |
| 960 | 2.96 | 0.90 | 3.74 |
| 1000 | 3.03 | 0.92 | 3.65 |
| 1250 | 3.43 | 1.05 | 3.22 |
| 1500 | 3.81 | 1.16 | 2.90 |
| 1800 | 4.23 | 1.29 | 2.61 |
| 2000 | 4.50 | 1.37 | 2.46 |
| 2200 | 4.75 | 1.45 | 2.33 |
| 2300 | 4.88 | 1.49 | 2.27 |
| 3000 | 5.71 | 1.74 | 1.94 |
| 3300 | 6.04 | 1.84 | 1.83 |



PRODUCT DATASHEET

UCF114-50JFNA

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

External Document Links

Notes