PRODUCT DATASHEET

# SCF38-50J

3/8" CELLFLEX Superflexible Foam-Dielectric Coaxial Cable

CELLFLEX® 3/8" superflexible cable support CBRS, C-Band and LAA up to 6GHz



FEATURES / BENEFITS

- **Ultra Low Attenuation**
  The reduced attenuation of CELLFLEX® coaxial cable results in extremly 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

External Document Links

CELLFLEX Drum Selection Guide

Notes

## Technical features

### INFORMATION

| | | |
|---|---|---|
| **Applications** | | OEM jumpers, BTS inter-cabinet connections, GPS lines, intended for outdoor usage |

### STRUCTURE

| | | |
|---|---|---|
| **Size** | | 3/8 |
| **Inner Conductor Diameter** | mm (in) | 2.6 (0.102) |
| **Inner Conductor Material** | | Copper-Clad Aluminum Wire |
| **Dielectric Diameter** | mm (in) | 6.3 (0.248) |
| **Dielectric Material** | | Foam Polyethylene |
| **Outer Conductor Diameter** | mm (in) | 9.1 (0.358) |
| **Outer Conductor Material** | | Corrugated Copper |
| **Jacket Diameter** | mm (in) | 10.2 (0.402) |
| **Jacket Material** | | Black Polyethylene |



All values nominal unless tolerances provided; information contained in the present datasheet is subject to confirmation at time of ordering

## TESTING AND ENVIRONMENTAL

| | | |
|---|---|---|
| **Phase Stabilized** | | Phase stabilized and phase matched cables and accessories are available upon request. |
| **Compliance** | | DIN EN ISO 9001:2015<br>ISO 14001:2015<br>RoHS 2011/65/EU - China RoHS SJ/T 11364-2006<br>REACH (EC 1907/2006)<br>UL1581 - UV Resistance Jacket<br>IEC 60754-1/-2 |
| **Installation Temperature** | °C(°F) | -40 to 60 (-40 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 | 13.4 |
| **Velocity** | % | 81 |
| **Capacitance** | pF/m (pF/ft) | 82 (25) |
| **Inductance** | uH/m (uH/ft) | 0.207 (0.063) |
| **Peak Power Rating** | kW | 11.9 |
| **RF Peak Voltage** | Volts | 1090 |
| **Jacket Spark** | Volt RMS | 5000 |
| **Inner Conductor dc Resistance** | Ω/1000 m (Ω/1000 ft) | 5.52 (1.68) |
| **Outer Conductor dc Resistance** | Ω/1000 m (Ω/1000 ft) | 7.3 (2.23) |
| **Passive Intermodulation PIM** | min. dBc | -160 |
| **Return Loss (VSWR) Performance** | | 20 (1.22) @ 450-617 MHz<br>24 (1.13) @ 617-960 MHz<br>24 (1.13) @ 1695-2200 MHz<br>20 (1.22) @ 2300-2700 MHz<br>18 (1.28) @ 3500-4200 MHz<br>16 (1.37) @ 5150-6000 MHz |

## MECHANICAL SPECIFICATIONS

| | | |
|---|---|---|
| **Cable Weight, Nominal** | kg/m (lb/ft) | 0.1 (0.06) |
| **Minimum Bending Radius, Repeated Bends** | mm (in) | 25 (0.984) |
| **Tensile Strength** | N (lb) | 600 (135) |
| **Recommended / Maximum Clamp Spacing** | m (ft) | 0.25 / 0.25 (0.8 / 0.8) |

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

| Frequency, MHz | dB per 100m | dB per 100ft | Power, kW |
|---|---|---|---|
| **1** | 0.41 | 0.12 | 19.43 |
| **100** | 4.21 | 1.28 | 1.88 |



All values nominal unless tolerances provided; information contained in the present datasheet is subject to confirmation at time of ordering

| | | | |
|---|---|---|---|
| **200** | 6.04 | 1.84 | 1.31 |
| **450** | 9.31 | 2.84 | 0.85 |
| **700** | 11.83 | 3.61 | 0.67 |
| **800** | 12.73 | 3.88 | 0.62 |
| **900** | 13.58 | 4.14 | 0.58 |
| **1800** | 20.05 | 6.11 | 0.39 |
| **2000** | 21.30 | 6.49 | 0.37 |
| **2200** | 22.51 | 6.86 | 0.35 |
| **2400** | 23.67 | 7.21 | 0.33 |
| **2700** | 25.35 | 7.73 | 0.31 |
| **3000** | 26.97 | 8.22 | 0.29 |
| **3500** | 29.55 | 9.01 | 0.27 |
| **4000** | 32.00 | 9.75 | 0.25 |
| **5000** | 36.62 | 11.16 | 0.22 |
| **13400** | 68.30 | 20.82 | 0.12 |



All values nominal unless tolerances provided; information contained in the present datasheet is subject to confirmation at time of ordering