PRODUCT DATASHEET

SCF12-50J

1/2" CELLFLEX® Superflexible Foam-Dielectric Coaxial Cable

CELLFLEX® 1/2" superflexible cable

Feature / 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 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

Technical features

APPLICATIONS

Applications	OEM jumpers, Main feed transitions to equipment, GPS lines, intended for outdoor usage

STRUCTURE

Cable Type	Foam-Dielectric, Superflexible
Size	1/2
Jacket Option	Black
Inner Conductor Diameter	3.6mm (0.142in)
Inner Conductor Material	Copper-Clad Aluminum Wire
Dielectric Diameter	9.3mm (0.366in)
Dielectric Material	Foam Polyethylene
Outer Conductor Diameter	12.3mm (0.484in)
Outer Conductor Material	Corrugated Copper
Jacket Diameter	13.7mm (0.539in)
Jacket Material	Black Polyethylene

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TESTING AND ENVIRONMENTAL

Fire Performance	Halogene Free
Installation Temperature	-40°C to 60°C (-40°F to 140°F)
Storage Temperature	-70°C to 85°C (-94°F to 185°F)
Operation Temperature	-50°C to 85°C (-58°F to 185°F)
Compliance	DIN EN ISO 9001:2015 ISO 14001:2015 RoHS 2011/65/EU - China RoHS SJ/T 11364-2006 REACH (EC 1907/2006)

ELECTRICAL SPECIFICATIONS

Impedance	50 +/- 1 Ω
Maximum Frequency	10.6 GHz
Velocity	77 %
Capacitance	86pF/m (26pF/ft)
Inductance	0.215µH/m (0.066µH/ft)
Peak Power Rating	24 kW
RF Peak Voltage	1550 Volts
Jacket Spark	5000 Volt RMS
Inner Conductor dc Resistance	2.97ohm/1000 m (0.9ohm/1000 ft)
Outer Conductor dc Resistance	6.5ohm/1000 m (1.98ohm/1000 ft)
Passive Intermodulation PIM	-160 typ. dBc
Return Loss (VSWR) Performance	Standard 20dB (1.222) / Premium 23/24dB (1.152/1.135) on specified frequencies
Phase Stabilized	Phase stabilized and phase matched cables and accessories are available upon request.

MECHANICAL SPECIFICATIONS

Cable Weight	0.135kg/m (0.09lb/ft)
Minimum Bending Radius	32mm (1.3in)
Bending Moment	2.5 (1.84)
Tensile Strength	650N (146lb)
Recommended / Maximum Clamp Spacing	0.3 / 0.5 (1 / 1.64)

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

Frequency, MHz	dB per 100m	dB per 100ft	Power, kW
Frequency, MHz	dB per 100m	dB per 100ft	Power, kW
100	3.21	0.98	2.2
200	4.6	1.4	1.54
450	7.04	2.14	1
700	8.91	2.71	0.79
800	9.57	2.92	0.74
900	10.2	3.11	0.69
1800	14.93	4.55	0.47
2000	15.83	4.83	0.45
2200	16.7	5.09	0.42
2400	17.54	5.35	0.4
2700	18.75	5.72	0.38
3000	19.91	6.07	0.35
3500	21.75	6.63	0.32
4000	23.5	7.16	0.3
5000	26.78	8.16	0.26
10600	42.14	12.85	0.17

External Document Links
CELLFLEX Drum Selection Guide

Notes

NOTES

- Notes SCF12-50JTC: TC cables (temperature cycled) are cables that are aged in order to reduce hysteresis effects. Available upon request.
- Europe ordering code:

  SCF12-50J-1-50: SCF12-50J, 50m length, Carton

  SCF12-50J-1-100: SCF12-50J, 100m length, Carton

  SCF12-50J-1-500: SCF12-50J, 500m length, Drum 08-053-X