PRODUCT DATASHEET

SCF14-50J

1/4" CELLFLEX Superflexible Foam-Dielectric Coaxial Cable

CELLFLEX® 1/4" 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
Drum / Length	m

STRUCTURE

Cable Type	Foam-Dielectric, Corrugated
Size	1/4
Jacket Option	Black
Inner Conductor Diameter	1.9mm (0.075in)
Inner Conductor Material	Copper-Clad Aluminum Wire
Dielectric Diameter	4.3mm (0.169in)
Dielectric Material	Foam Polyethylene
Outer Conductor Diameter	6.5mm (0.256in)
Outer Conductor Material	Corrugated Copper
Jacket Diameter	7.8mm (0.307in)
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	Ω
Maximum Frequency	GHz
Velocity	%
Capacitance	82pF/m (25pF/ft)
Inductance	0.207µH/m (0.063µH/ft)
Peak Power Rating	kW
RF Peak Voltage	Volts
Jacket Spark	Volt RMS
Inner Conductor dc Resistance	10.5ohm/1000 m (3.2ohm/1000 ft)
Outer Conductor dc Resistance	9ohm/1000 m (2.75ohm/1000 ft)
Passive Intermodulation PIM	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	0.06kg/m (0.04lb/ft)
Minimum Bending Radius	25mm (0.984in)
Bending Moment	0.7 (0.5)
Tensile Strength	600N (135lb)
Recommended / Maximum Clamp Spacing	0.2 / 0.2 (0.67 / 0.67)

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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
100	5.82	1.77	1.14
200	8.33	2.54	0.79
450	12.73	3.88	0.52
700	16.1	4.91	0.41
800	17.29	5.27	0.38
900	18.42	5.62	0.36
1800	26.9	8.2	0.25
2000	28.51	8.69	0.23
2200	30.07	9.17	0.22
2400	31.57	9.62	0.21
2700	33.73	10.28	0.2
3000	35.8	10.91	0.18
3500	39.09	11.92	0.17
4000	42.2	12.86	0.16
5000	48.03	14.64	0.14
20400	113.49	34.6	0.06

External Document Links
CELLFLEX Drum Selection Guide

Notes