

## Product Data Sheet for SCF14-50JFN

### 1/4" CELLFLEX® Superflexible Foam-Dielectric Coaxial Cable

CELLFLEX® 1/4" superflexible cable; flame retardant/  
halogen free jacket



Product Specifications	
Cable Type	Foam-Dielectric, Superflexible
Size	1/4"
Jacket	Flame Retardant
Return Loss (VSWR) Performance	Standard
Maximum Return Loss, dB (VSWR)	Contact RFS for your frequency band. Typically 18 dB (1.29:1 VSWR)
Impedance, ohm	50 +/- 1
Maximum Frequency, GHz	20,4
Velocity, percent	82
Peak Power Rating, kW	5.5
Inner Conductor dc Resistance, ohm/1000 m (ohm/1000 ft)	10.40 (3.17)
Outer Conductor dc Resistance, ohm/1000 m (Ohm/1000 ft)	6.60 (2.01)
RF Peak Voltage, Volts	740
Jacket Spark, Volt RMS	5000
Capacitance, pF/m (pF/ft)	82.0 (25.0)
Inductance, µH/m (µH/ft)	0.207 (0.063)
Outer Conductor Material	Corrugated Copper
Inner Conductor Material	Copper-Clad Aluminum Wire
Diameter over Jacket Nominal, mm (in)	7.8 (0.31)
Diameter Copper Outer Conductor, mm (in)	6.5 (0.26)
Diameter Inner Conductor, mm (in)	1.9 (0.075)
Diameter Dielectric, mm (in)	4.3 (0.170)
Minimum Bending Radius, Repeated Bends, mm (in)	25 (1.0)
Bending Moment, N•m (lb-ft)	0.7 (0.5)

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<b>Cable Weight, kg/m (lb/ft)</b>	0.07 (0.05)
<b>Tensile Strength, N (lb)</b>	600 (135)
<b>Flat Plate Crush Strength, N/mm (lb/in)</b>	18.4 (100)
<b>Recommended / Maximum Clamp Spacing, m (ft)</b>	0.20 / 0.20 (0.67 / 0.67)
<b>Installation Temperature, °C(°F)</b>	-25 to +60 (-13 to +140)
<b>Storage Temperature, °C (°F)</b>	-40 to +85 (-40 to +185)
<b>Operation Temperature, °C(°F)</b>	-40 to +85 (-40 to +185)
<b>Phase Stabilized</b>	Phase stabilized and phase matched cables and assemblies are available upon request.
<b>Flame Retardant Jacket Specifications</b>	Meets/Exceeds: IEC 60754-1, -2; IEC 60332-1, -3.C; UL 1581; UL 1666; NEC type CATVR

#### Features/Benefits

- **Low Attenuation**

The low attenuation of CELLFLEX® coaxial cable results in highly efficient signal transfer in your RF system.

- **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.

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## Product Data Sheet for SCF14-50JFN (Cont.)

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#### SCF14-50J/JFN

#### ATTENUATION AND AVERAGE POWER

Frequency MHz	Attenuation dB/100 m	Attenuation dB/100 ft.	Average Power kW
0.5	0.401	0.122	5.50
1	0.568	0.173	5.50
1.5	0.696	0.212	5.50
2	0.804	0.245	5.50
10	1.81	0.550	3.65
20	2.56	0.781	2.57
30	3.15	0.960	2.10
50	4.08	1.24	1.62
88	5.45	1.66	1.21
100	5.82	1.77	1.13
108	6.06	1.85	1.09
150	7.17	2.19	0.920
174	7.75	2.36	0.852
200	8.33	2.54	0.793
300	10.3	3.13	0.642
400	12.0	3.65	0.552
450	12.7	3.88	0.518
500	13.5	4.10	0.490
512	13.6	4.15	0.484
600	14.8	4.52	0.445
700	16.1	4.91	0.410
800	17.3	5.27	0.382
824	17.6	5.35	0.376
894	18.4	5.60	0.360
900	18.4	5.62	0.358
925	18.7	5.70	0.353
960	19.1	5.81	0.346
1000	19.5	5.94	0.338
1250	22.0	6.71	0.300
1500	24.3	7.41	0.271
1700	26.1	7.94	0.253
1800	26.9	8.20	0.245
2000	28.5	8.69	0.231
2200	30.1	9.17	0.219
2300	30.8	9.40	0.214
3000	35.8	10.9	0.184

Standard Conditions:

For attenuation: VSWR 1.0, cable temperature 20° C (68° F).

For average power: VSWR 1.0, ambient temperature 40° C (104°F),  
inner conductor temperature 100° C (212° F). No solar loading.

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