

**SCF12-50CPR****1/2" CELLFLEX® Superflexible Foam-Dielectric Coaxial Cable**

CELLFLEX® 1/2" superflexible cable; flame retardant/ halogen free jacket CPR rated

Feature / 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 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 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	Indoor	Wireless Communication	HF Defense	Microwave	Mobile Radio	Cable Solutions
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STRUCTURE

Cable Type	Foam-Dielectric, Superflexible
Size	1/2
Jacket Option	Black
Inner Conductor Diameter	3.56mm (0.14in)
Inner Conductor Material	Copper-Clad Aluminum Wire
Dielectric Diameter	9.3mm (0.366in)
Dielectric Material	Foam Polyethylene
Outer Conductor Diameter	12.3mm (0.48in)
Outer Conductor Material	Corrugated Copper
Jacket Diameter	13.75mm (0.54in)
Jacket Material	Polyethylene, PE, Metalhydroxite Filling

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; NEC type CATVR; CPR: https://products.rfsworld.com/userfiles/cpr/rfs-products-cpr-compliance.pdf
Installation Temperature	-15°C to 60°C (5°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)



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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	2.9ohm/1000 m (0.88ohm/1000 ft)
Outer Conductor dc Resistance	5.3ohm/1000 m (1.62ohm/1000 ft)
Return Loss (VSWR) Performance	Standard for 40-5925 MHz, Premium according to B-Class
Phase Stabilized	Phase stabilized and phase matched cables and assemblies are available upon request.

MECHANICAL SPECIFICATIONS

Cable Weight	0.18kg/m (0.12lb/ft)
Minimum Bending Radius	32mm (1.3in)
Bending Moment	1.8 (1.33)
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
0.5	0.221	0.067	24
1	0.312	0.095	22.6
1.5	0.383	0.117	18.4
2	0.442	0.135	16
10	0.995	0.303	7.1
20	1.41	0.43	5.01
30	1.73	0.529	4.08
50	2.25	0.686	3.14
88	3.01	0.916	2.35
100	3.21	0.978	2.2
108	3.34	1.02	2.11
150	3.96	1.21	1.78
174	4.27	1.3	1.65
200	4.6	1.4	1.53
300	5.68	1.73	1.24
400	6.61	2.01	1.07
450	7.04	2.14	1
500	7.44	2.27	0.949
512	7.53	2.3	0.938
600	8.2	2.5	0.861
700	8.91	2.71	0.792
750	9.24	2.82	0.764
800	9.57	2.92	0.738
824	9.72	2.96	0.726
894	10.2	3.1	0.692
900	10.2	3.11	0.692
925	10.4	3.16	0.679
960	10.6	3.22	0.666
1000	10.8	3.29	0.654
1250	12.2	3.72	0.579
1400	13	3.96	0.543
1500	13.5	4.11	0.523
1700	14.5	4.41	0.487
1800	14.9	4.55	0.474
2000	15.8	4.82	0.447
2100	16.3	4.96	0.433
2200	16.7	5.09	0.423
2400	17.5	5.35	0.403
2500	17.9	5.47	0.394
2600	18.4	5.59	0.384
2700	18.8	5.72	0.376
3000	19.9	6.07	0.355
3500	21.8	6.63	0.324



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4000	23.5	7.16	0.3
5000	26.8	8.16	0.263
6000	29.8	9.09	0.237
7000	32.7	9.97	0.216
8000	35.5	10.8	0.199
9000	38.1	11.6	0.185
10000	40.6	12.4	0.174

External Document Links

Notes

Phase stabilized versions available upon request.

NOTES

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Related Documents



Web URL to CPR resources with DoP and CE-label download folders
Other Documents