



CELLFLEX® 1-1/4" premium attenuation low loss Ultraflexible cable support CBRS, C-Band up to 4.1GHz; flame retardant/ halogen free jacket

FEATURES / BENEFITS

- Ultra Low Attenuation**  
The further reduced attenuation of CELLFLEX® premium attenuation coaxial cable results in extremely efficient signal transfer in your RF system, especially at high frequencies.
- 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 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.



1-1/4" CELLFLEX® Low-Loss Ultraflexible Foam Dielectric Coaxial Cable

Technical features

APPLICATIONS

Applications		Indoor	Wireless Communication	TV & Radio	HF Defense	Mobile Radio	Cable Solutions
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STRUCTURE

Size		1-1/4
Jacket Option		Black
Inner Conductor Diameter	mm (in)	13.8 (0.55)
Inner Conductor Material		Corrugated Copper Tube
Dielectric Diameter	mm (in)	31 (1.22)
Dielectric Material		Foam Polyethylene
Outer Conductor Diameter	mm (in)	36 (1.42)
Outer Conductor Material		Corrugated Copper
Jacket Diameter	mm (in)	39 (1.54)
Jacket Material		Polyethylene, PE, Metalhydroxite Filling
Cable Type		Foam-Dielectric, Corrugated



**TESTING AND ENVIRONMENTAL**

<b>Fire Performance</b>		Flame Retardant, LS0H
<b>Flame Retardant Jacket Specifications</b>		Meets/Exceeds: IEC 60754-1, -2; IEC 60332-1, -3.C; UL 1581; UL 1666;NFPA130; NEC type CATVR
<b>Installation Temperature</b>	°C(°F)	-25 to 60 (-13 to 140)
<b>Storage Temperature</b>	°C (°F)	-70 to 85 (-94 to 185)
<b>Operation Temperature</b>	°C(°F)	-50 to 85 (-58 to 185)

**ELECTRICAL SPECIFICATIONS**

<b>Impedance</b>	Ω	50 +/- 1
<b>Maximum Frequency</b>	GHz	3.3
<b>Velocity</b>	%	89
<b>Capacitance</b>	pF/m (pF/ft)	75 (22.9)
<b>Inductance</b>	uH/m (uH/ft)	0.184 (0.056)
<b>Peak Power Rating</b>	kW	178
<b>RF Peak Voltage</b>	Volts	4200
<b>Jacket Spark</b>	Volt RMS	10000
<b>Inner Conductor dc Resistance</b>	Ω/1000 m (Ω/1000 ft)	1.94 (0.59)
<b>Outer Conductor dc Resistance</b>	Ω/1000 m (Ω/1000 ft)	0.55 (0.17)
<b>Return Loss (VSWR) Performance</b>		20 (1.22) @ 450-617 MHz 24 (1.13) @ 617-960 MHz 24 (1.13) @ 1695-2200 MHz 20 (1.22) @ 2300-2700 MHz 15 (1.43) @ 3500-4100 MHz
<b>Phase Stabilized</b>		Phase stabilized and phase matched cables and assemblies are available upon request.
<b>Temperature &amp; Power</b>		Standard

**MECHANICAL SPECIFICATIONS**

<b>Cable Weight, Nominal</b>	kg/m (lb/ft)	0.79 (0.53)
<b>Minimum Bending Radius, Single Bend</b>	mm (in)	150 (6)
<b>Minimum Bending Radius, Repeated Bends</b>	mm (in)	250 (10)
<b>Bending Moment</b>	Nm (lb-ft)	36 (25.6)
<b>Tensile Strength</b>	N (lb)	2900 (650)
<b>Recommended / Maximum Clamp Spacing</b>	m (ft)	1 / 1.2 (3.25 / 4)



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

Frequency, MHz	dB per 100m	dB per 100ft	Power, kW
0.5	0.06	0.02	178
1	0.08	0.03	131
1.5	0.10	0.03	107
2	0.12	0.04	92.30
10	0.27	0.08	41
20	0.38	0.12	28.80
30	0.47	0.14	23.40
50	0.61	0.19	18
88	0.82	0.25	13.50
100	0.88	0.27	12.60
108	0.91	0.28	12.10
150	1.09	0.33	10.20
174	1.17	0.36	9.42
200	1.26	0.39	8.75
300	1.57	0.48	7.05
400	1.83	0.56	6.04
450	1.95	0.59	5.67
500	2.06	0.63	5.35
512	2.09	0.64	5.29
600	2.28	0.70	4.85
700	2.48	0.76	4.45
800	2.67	0.82	4.14
824	2.72	0.83	4.07
894	2.84	0.87	3.89
900	2.85	0.87	3.87
925	2.90	0.88	3.81
960	2.96	0.90	3.74
1000	3.03	0.92	3.65
1250	3.43	1.05	3.22
1500	3.81	1.16	2.90
1800	4.23	1.29	2.61
2000	4.50	1.37	2.46
2200	4.75	1.45	2.33
2300	4.88	1.49	2.27
3000	5.71	1.74	1.94
3300	6.04	1.84	1.83



PRODUCT DATASHEET

**UCF114-50JFNA**

1-1/4" CELLFLEX<sup>®</sup> Premium Attenuation Ultraflexible Low-Loss Foam-Dielectric Coaxial Cable

External Document Links

Notes