PRODUCT DATASHEET

LCFS114-50CPR

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

CELLFLEX®1-1/4" premium attenuation low loss flexible cable

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.

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

Technical features

APPLICATIONS

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

STRUCTURE

Cable Type		Foam-Dielectric, Corrugated
Size		1-1/4
Jacket Option		Black
Inner Conductor	mm (in)	13.1 (0.52)
Dielectric	mm (in)	32.7 (1.29)
Outer Conductor	mm (in)	35.9 (1.41)
Jacket	mm (in)	39 (1.54)

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	°C(°F)	-15 to 60 (5 to 140)
Storage Temperature	°C(°F)	-70 to 85 (-94 to 185)
Operation Temperature	°C(°F)	-50 to 85 (-58 to 185)

ELECTRICAL SPECIFICATIONS

Impedance, Ohm	Ω	50 +/- 1
Maximum Frequency	GHz	3.7
Velocity, percent	%	89
Capacitance	pF/m (pF/ft)	75 (22.9)
Inductance, uH/m (uH/ft)	µH/m (µH/ft)	0.188 (0.057)
Peak Power Rating	kW	176
RF Peak Voltage	Volts	4200
Jacket Spark	Volt RMS	10000
Inner Conductor dc Resistance, Ω/km (Ω/kft)	Ω/1000 m (Ω/1000 ft)	0.83 (0.25)
Outer Conductor dc Resistance, ohm/1000 m (Ohm/1000 ft)	Ω/1000 m (Ω/1000 ft)	0.73 (0.22)
Return Loss (VSWR) Performance		Standard for 40-2700, 3300-3700 MHz, Premium according to B-Class
Min. Return Loss (Max. VSWR)	dB (VSWR)	Standard 20 (1.222), Premium 24 (1.135)/ 23 (1.152)
Phase Stabilized		Phase stabilized and phase matched cables and assemblies are available upon request.
Temperature & Power		Standard

MECHANICAL SPECIFICATIONS

Cable Weight, Nominal	kg/m (lb/ft)	0.97 (0.65)
Minimum Bending Radius, Single Bend	mm (in)	200 (8)
Minimum Bending Radius, Repeated Bends	mm (in)	380 (15)
Bending Moment, Nm (lb-ft)	Nm (lb*ft)	43 (32)
Tensile Strength	N (lb)	2490 (560)
Recommended / Maximum Clamp Spacing	m (ft)	1 / 1.2 (3.25 / 4)

ATTENUATION AND POWER RATING

Frequency, MHz	dB per 100m	dB per 100ft	Power, kW
0.5	0.06	0.02	176
1	0.08	0.02	139
1.5	0.10	0.03	113
2	0.11	0.03	98.20
10	0.25	0.08	43.60
20	0.36	0.11	30.70
30	0.44	0.13	25
50	0.57	0.17	19.20
88	0.77	0.23	14.40
100	0.82	0.25	13.50
108	0.85	0.26	12.90
150	1.01	0.31	10.90
174	1.09	0.33	10.10
200	1.17	0.36	9.40
300	1.45	0.44	7.58
400	1.69	0.52	6.50
450	1.81	0.55	6.07
500	1.91	0.58	5.76
512	1.94	0.59	5.67
600	2.11	0.64	5.21
700	2.29	0.70	4.80
750	2.38	0.73	4.62
800	2.47	0.75	4.45
824	2.51	0.76	4.38
894	2.62	0.80	4.20
900	2.63	0.80	4.18
925	2.67	0.82	4.12
960	2.73	0.83	4.03
1000	2.79	0.85	3.94
1250	3.16	0.96	3.48
1400	3.37	1.03	3.26
1500	3.50	1.07	3.14
1900	4	1.22	2.75
2000	4.12	1.26	2.67
2100	4.24	1.29	2.59
2200	4.35	1.33	2.53
2500	4.69	1.43	2.34
2600	4.80	1.46	2.29
2700	4.90	1.49	2.24
3000	5.21	1.59	2.11

3300	5.51	1.68	2
3600	5.80	1.77	1.90
3700	5.90	1.80	1.86

External Document Links

Web URL to CPR ressources with DoP and CE-label download folders

Notes