



7/8" CELLFLEX® Premium Attenuation Low-Loss Foam-Dielectric Coaxial Cable

CELLFLEX®7/8" 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.



7/8" CELLFLEX® Low-Loss Foam Dielectric Coaxial Cable

Technical Features

APPLICATIONS

Applications	Main feed line, Riser-rated In-Building, CPR classified cable
--------------	---------------------------------------------------------------

STRUCTURE

Cable Type		Foam-Dielectric, Corrugated
Size		7/8"
Jacket Option		Black
Inner Conductor	mm (in)	9.3 (0.37) Copper Tube
Dielectric	mm (in)	21.5 (0.85) Foam Polyethylene
Outer Conductor	mm (in)	25.2 (0.99) Corrugated Copper
Jacket	mm (in)	27.8 (1.09) Polyethylene, PE, Metalhydroxite Filling

ELECTRICAL SPECIFICATIONS

Impedance	Ω	50 +/- 1
Maximum Frequency	GHz	5.0
Velocity	%	90.0
Capacitance	pF/m (pF/ft)	74 (22.5)
Inductance	μH/m (μH/ft)	0.185 (0.056)
Peak Power Rating	kW	85.0
RF Peak Voltage	Volts	2920.0
Jacket Spark	Volt RMS	8000.0
Inner Conductor dc Resistance	Ω/1000 m (Ω/1000 ft)	1.77 (0.54)
Outer Conductor dc Resistance	Ω/1000 m (Ω/1000 ft)	1.93 (0.59)
Return Loss (VSWR) Performance		Standard for 40-5000 MHz, Premium according to B-Class
Min. Return Loss (Max. VSWR)	dB (VSWR)	Standard 20 (1.222), Premium 24 (1.135)
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)	0.45 (0.3)
Minimum Bending Radius, Single Bend	mm (in)	120 (5)
Minimum Bending Radius, Repeated Bends	mm (in)	250 (10)
Bending Moment	Nm (lb*ft)	16
Tensile Strength	N (lb)	1440 (324)
Recommended / Maximum Clamp Spacing	m (ft)	0.8 / 1 (2.75 / 3.25)

PRODUCT DATASHEET

LCF78-50CPR

RADIO FREQUENCY SYSTEMS
 The Clear Choice®


7/8" CELLFLEX® Premium Attenuation Low-Loss Foam-Dielectric Coaxial Cable

ATTENUATION AND POWER RATING

Frequency MHz	Attenuation		Power kW
	dB/100m	dB/100ft	
0.5	0.08	0.024	91.00
1	0.11	0.034	74.20
1.5	0.14	0.042	60.70
2	0.16	0.049	52.40
10	0.36	0.109	23.30
20	0.51	0.156	16.40
30	0.63	0.191	13.40
50	0.81	0.248	10.30
88	1.09	0.331	7.69
100	1.16	0.354	7.22
108	1.21	0.368	6.93
150	1.43	0.437	5.86
174	1.55	0.472	5.41
200	1.66	0.507	5.05
300	2.06	0.627	4.07
400	2.40	0.731	3.49
450	2.55	0.778	3.29
500	2.70	0.823	3.10
512	2.73	0.833	3.07
600	2.98	0.907	2.81
700	3.23	0.986	2.59
750	3.36	1.02	2.49
800	3.48	1.06	2.41
824	3.53	1.08	2.37
894	3.69	1.13	2.27
900	3.71	1.13	2.26
925	3.76	1.15	2.23
960	3.84	1.17	2.18
1000	3.93	1.20	2.13
1250	4.44	1.35	1.89
1400	4.73	1.44	1.77
1500	4.91	1.50	1.71
1700	5.27	1.61	1.59
1800	5.44	1.66	1.54
2000	5.77	1.76	1.45
2100	5.93	1.81	1.41
2200	6.09	1.86	1.38
2400	6.40	1.95	1.31
2500	6.55	2.00	1.28
2600	6.70	2.04	1.25
2700	6.84	2.09	1.23
3000	7.27	2.22	1.15
3500	7.95	2.42	1.05
4000	8.60	2.62	0.974
4900	9.69	2.95	0.865
5000	9.81	2.99	0.854

Attenuation at 20°C (68°F) cable temperature;
 tolerance +/- 5% max.; Mean power rating at
 40°C (104°F) ambient temperature

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

External Document Links

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

Notes

LCF78-50CPR

REV: D

REV DATE: 16.Apr.2020

www.rfsworld.com