RADIO FREQUENCY SYSTEMS
The Clear Choice®

1-5/8" CELLFLEX® Premium Attenuation Low-Loss Foam-Dielectric Coaxial Cable

CELLFLEX®1-5/8" premium attenuation low loss flexible cable

FEATURES / BENEFITS

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

1-5/8" 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		1-5/8"
Jacket Option		Black
Inner Conductor	mm (in)	17.6 (0.69) Corrugated Copper Tube
Dielectric	mm (in)	42.4 (1.67) Foam Polyethylene
Outer Conductor	mm (in)	46.4 (1.83) Corrugated Copper
Jacket	mm (in)	50.2 (1.98) Polyethylene, PE, Metalhydroxite Filling
ELECTRICAL SPECIFICATIONS		
Impedance	Ω	50 +/- 1
Maximum Frequency	GHz	2.75
Velocity	%	90.0
Capacitance	pF/m (pF/ft)	74 (22.5)
Inductance	µH/m (µH/ft)	0.185 (0.056)
Peak Power Rating	kW	310.0
RF Peak Voltage	Volts	5600.0
Jacket Spark	Volt RMS	10000.0
Inner Conductor dc Resistance	Ω/1000 m (Ω/1000 ft)	1.3 (0.4)
Outer Conductor dc Resistance	Ω/1000 m (Ω/1000 ft)	0.47 (0.14)
Return Loss (VSWR) Performance		Premium for 380-410, 694-960, 1695-2200, 2400-2496 MHz Standard for 500-694, 1452-1496, 2300-2400, 2496-2700 MHz
Maximum Return Loss	dB (VSWR)	Premium: 24 (1.135) and Standard: 20 (1.222)
Phase Stabilized		Phase stabilized and phase matched cables and assemblies are available upon request.
Temperature & Power		Standard
MECHANICAL SPECIFICATIONS		
Cable Weight	kg/m (lb/ft)	1.25 (0.84)
Minimum Bending Radius, Single Bend	mm (in)	200 (8)
Minimum Bending Radius, Repeated Bends	mm (in)	500 (20)
Bending Moment	Nm (lb*ft)	42
Tensile Strength	N (lb)	2500 (562)
Recommended / Maximum Clamp Spacing	m (ft)	1.2 / 1.5 (4 / 5)

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ATTENUATION AND POWER RATING

Frequency MHz	Attenuation dB/100m	Attenuation dB/100ft	Power kW
0.5	0.04	0.013	258.00
1	0.06	0.019	182.00
1.5	0.08	0.023	148.00
2	0.09	0.027	128.00
10	0.20	0.06	56.90
20	0.28	0.086	39.90
30	0.34	0.105	32.50
50	0.45	0.137	25.00
88	0.60	0.184	18.60
100	0.64	0.196	17.40
108	0.67	0.205	16.70
150	0.80	0.243	14.00
174	0.86	0.263	13.00
200	0.93	0.283	12.10
300	1.16	0.352	9.66
400	1.35	0.412	8.30
450	1.44	0.439	7.78
500	1.53	0.465	7.33
512	1.55	0.471	7.23
600	1.69	0.515	6.63
700	1.84	0.561	6.09
750	1.91	0.583	5.87
800	1.98	0.604	5.66
824	2.02	0.615	5.55
894	2.11	0.644	5.31
900	2.12	0.646	5.29
925	2.15	0.656	5.21
960	2.20	0.67	5.10
1000	2.25	0.686	4.98
1250	2.56	0.779	4.38
1400	2.73	0.832	4.11
1500	2.84	0.866	3.95
1700	3.06	0.932	3.66
1800	3.16	0.963	3.55
2000	3.36	1.03	3.34
2100	3.46	1.06	3.24
2200	3.56	1.08	3.15
2400	3.75	1.14	2.99
2500	3.84	1.17	2.92
2600	3.93	1.20	2.85
2700	4.02	1.23	2.79
2750	4.07	1.24	2.75

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: EN50575:2017 class Cca s1 do a1
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

Notes