



1/2" Foam-Dielectric Coaxial Cable Corrugated Copper – 50 Ohm

ITEM NUMBER	DESCRIPTION
EC4-50	Low Loss Cable, standard jacket
EC4-50-HLFR	Low Loss Cable, fire retardant, halogen free jacket

CONSTRUCTION

• Inner conductor	
Material	copper clad aluminum
Diameter, in (mm)	0.189 (4.8)
• Dielectric	
Material	microcell gas-injected PE
Diameter, in (mm)	0.488 (12.4)
• Outer conductor	
Material	corrugated copper
Diameter, in (mm)	0.543 (13.8)
• Outer sheath	
Material	Durathene™
Thickness, in (mm)	0.043 (1.1)
Diameter, in (mm)	0.630 (16.0)

MECHANICAL CHARACTERISTICS

• Minimum bending radius	
a) Single bending, in (cm)	2.8 (7)
b) 15 repeated bends, in (cm)	4.7 (12)
• Maximum pulling strength, lb (kg)	220 (100)
• Recommended temperature range	
- Storage	-94 to +185°F (-70 to +85°C)
- Installation	-40 to +140°F (-40 to +60°C)
- Operation	-67 to +185°F (-55 to +85°C)
• Maximum length per hoisting grip, ft (m)	230 (70)
• Maximum hanger spacing, ft (m)	3 (0.9)
• Flat plate crush resistance, lb/in (kg/mm)	106 (1.9)
• Bending moment, lb-ft (N•m)	2.6 (3.5)
• Weight, lb/ft (kg/m)	0.16 (0.24)

ELECTRICAL CHARACTERISTICS

• Characteristic impedance,	50 ± 1
• Nominal capacitance, pF/ft (pF/m)	23 (76)
• Relative propagation velocity, %	88
• Inductance, µH/ft (µH/m)	0.058 (0.19)
• DC-resistance at 68°F (20°C)	
- Inner conductor, /1000 ft (/1000 m)	0.45 (1.48)
- Outer conductor, /1000 ft (/1000 m)	0.62 (2.04)
• RF peak voltage, kV	1.6
• RF peak power, kW	25.6
• Cut-off frequency, GHz	9.8
• Insulation resistance, M /km	≥5000

ELECTRICAL CHARACTERISTICS

Frequency (MHz)	Attenuation at 68°F (20°C)*		Mean power rating** (kW)
	(dB/100 ft)	(dB/100m)	
10	0.205	0.672	11.74
20	0.291	0.954	8.28
30	0.357	1.17	6.74
50	0.463	1.52	5.19
88	0.619	2.03	3.88
100	0.661	2.17	3.63
108	0.688	2.26	3.49
150	0.815	2.67	2.94
174	0.880	2.89	2.72
200	0.946	3.10	2.53
300	1.17	3.83	2.05
400	1.36	4.46	1.76
450	1.45	4.75	1.66
500	1.53	5.02	1.57
512	1.55	5.08	1.54
600	1.69	5.53	1.43
700	1.83	6.01	1.31
800	1.97	6.45	1.22
824	2.00	6.56	1.20
894	2.09	6.85	1.15
960	2.17	7.12	1.11
1000	2.22	7.28	1.08
1250	2.51	8.22	0.96
1500	2.77	9.09	0.87
1700	2.97	9.74	0.81
1800	3.07	10.1	0.79
2000	3.25	10.7	0.74
2100	3.34	11.0	0.72
2200	3.43	11.2	0.70
2300	3.52	11.5	0.68
3000	4.09	13.4	0.59
3400	4.39	14.4	0.55
4000	4.82	15.8	0.50
5000	5.49	18.0	0.44
6000	6.11	20.1	0.39

* Nominal values

** Ambient temperature = 104°F (40°C); temperature of inner conductor = 212°F (100°C); VSWR = 1.0; no solar loading