

LOW LOSS RF CABLE

HCAA-50-12 (1/2")



CONSTRUCTION MATERIALS

Inner Conductor	Copper-Clad Aluminum Wire
Dielectric	Physical Foam Polyethylene
Outer Conductor	Corrugated Copper Tube
Jacket	Black PE

PHYSICAL DIMENSIONS

Inner Conductor Diameter	4.80 mm
Dielectric Diameter	12.30 mm
Outer Conductor Diameter	13.80 mm
Diameter Over Jacket	15.70 mm

MECHANICAL SPECIFICATIONS

Minimum Bending Radius	
Single Bending	50 mm
Repeated Bending	125 mm
Minimum Number of Bends	15
Tensile Strength	1130 N

ELECTRICAL SPECIFICATION

Capacitance	76.0 pF/m	
Impedance	50±1 Ω	
Velocity	88%	
RF Peak Voltage	1.60 KV	
Peak Power Rating	40 KW	
Cut-off Frequency	8.8 GHz	
Shielding Effectiveness >10MHz	>120 dB	
Insulation Resistance	5000 MΩ·km	
	VSWR	Return loss(dB)
680~800 MHz	≤ 1.13	24.3
800~960 MHz	≤ 1.13	24.3
1700~2200 MHz	≤ 1.13	24.3
2300~2700 MHz	≤ 1.13	24.3
2700~4000 MHz	≤ 1.20	20.8

ENVIRONMENTAL SPECIFICATION

Storage Temperature	-55 °C ~ +85 °C
Installation Temperature	-40 °C ~ +60 °C
Operation Temperature	-55 °C ~ +85 °C

PERFORMANCE

Frequency MHz	Attenuation		Average Power Rating (kW)
	dB/100 m	dB/100 ft	
100	2.17	0.66	3.94
150	2.67	0.81	3.17
200	3.10	0.94	2.75
280	3.69	1.12	2.27
450	4.74	1.44	1.80
700	6.01	1.83	1.42
800	6.45	1.97	1.33
900	6.87	2.09	1.25
1000	7.28	2.22	1.18
1500	9.08	2.77	0.95
1800	10.05	3.06	0.86
2000	10.66	3.25	0.81
2100	10.96	3.34	0.79
2200	11.24	3.43	0.77
2300	11.54	3.52	0.75
2400	11.80	3.60	0.75
2500	12.08	3.68	0.73
2600	12.36	3.77	0.71
3000	13.39	4.08	0.65
3400	14.40	4.39	0.60
3500	14.66	4.47	0.59
3700	15.12	4.61	0.58
4000	15.82	4.82	0.55
5000	18.01	5.49	0.48
6000	20.05	6.11	0.43
8000	23.83	7.26	0.37
8800	25.25	7.70	0.34

Standard Conditions .

For attenuation : VSWR 1.0 , cable temperature 20 °C (68 °F)

For average power : VSWR 1.0 , ambient temperature 40 °C (104 °F) ,

Inner conductor temperature 100 °C (212 °F) . No solar loading .

Maximum attenuation value shall be 105% off the nominal attenuation value.