HCA618-50JFN
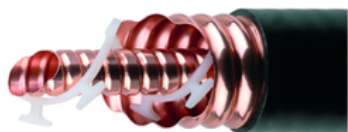
6 1/8" HELIFLEX® Air-Dielectric Coaxial Cable, flame retardant/ halogen free jacket

HELIFLEX® 6-1/8" low loss air dielectric cable; flame retardant/ halogen free jacket

Feature / Benefits

- **Low Attenuation**
  The low attenuation of HELIFLEX® coaxial cable results in highly efficient signal transfer in your RF system.
- **Complete Shielding**
  The solid outer conductor of HELIFLEX® coaxial cable creates a continuous RFI/EMI shield that minimizes system interference.
- **Low VSWR**
  Special low VSWR versions of HELIFLEX® coaxial cables contribute to low system noise.
- **Outstanding Intermodulation Performance**
  HELIFLEX® 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, HELIFLEX® 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.

Technical features

APPLICATIONS

Applications	TV & Radio	HF Defense	Cable Solutions

STRUCTURE

Cable Type	Air-Dielectric, Corrugated
Size	6-1/8
Jacket Option	Black
Inner Conductor Diameter	67mm (2.63in)
Inner Conductor Material	Corrugated Copper Tube
Dielectric Diameter	147mm (5.78in)
Dielectric Material	Helical Polyethylene Spacer
Outer Conductor Diameter	162mm (6.37in)
Outer Conductor Material	Corrugated Copper
Jacket Diameter	169mm (6.65in)
Jacket Material	Polyethylene, PE, Metalhydroxite Filling

TESTING AND ENVIRONMENTAL

Fire Performance	Flame Retardant, LS0H
Flame Retardant Jacket Specifications	The jacketing meets the testing requirements of Underwriters Laboratories UL 1666, and qualifies for the NEC CATVR type rating code (NEC Section 820-51(b) Type CATVR- NEC 1996)as well as IEC 60332-1
Installation Temperature	-25°C to 60°C (-13°F to 140°F)
Storage Temperature	-70°C to 85°C (-94°F to 185°F)
Operation Temperature	-50°C to 85°C (-58°F to 185°F)

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ELECTRICAL SPECIFICATIONS

Impedance	50 +/- 0.5 Ω
Maximum Frequency	0.86 GHz
Velocity	97 %
Capacitance	69pF/m (21pF/ft)
Inductance	0.173µH/m (0.053µH/ft)
Peak Power Rating	2890 kW
RF Peak Voltage	17000 Volts
Jacket Spark	8000 Volt RMS
Inner Conductor dc Resistance	0.17ohm/1000 m (0.052ohm/1000 ft)
Outer Conductor dc Resistance	0.044ohm/1000 m (0.013ohm/1000 ft)
Return Loss (VSWR) Performance	Standard
Phase Stabilized	Phase matched cables and assemblies are available upon request.

MECHANICAL SPECIFICATIONS

Cable Weight	10kg/m (6.7lb/ft)
Minimum Bending Radius	1000mm (39in)
Minimum Bending Radius	1500mm (59in)
Bending Moment	1000 (738)
Tensile Strength	6000N (1349lb)
Recommended / Maximum Clamp Spacing	1 / 2 (3.3 / 6.6)

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ATTENUATION @ 20°C (68°F) AND POWER RATING @ 40°C (104°F)

Frequency, MHz	dB per 100m	dB per 100ft	Power, kW
0.5	0.013	0.004	2500
1	0.018	0.006	1770
1.5	0.022	0.007	1440
2	0.026	0.008	1250
10	0.058	0.018	554
20	0.082	0.025	390
30	0.101	0.031	318
50	0.132	0.04	243
88	0.176	0.054	183
100	0.189	0.058	171
108	0.196	0.06	165
150	0.233	0.071	139
174	0.252	0.077	129
200	0.272	0.083	120
300	0.338	0.103	97
400	0.395	0.12	83.6
450	0.421	0.128	78.8
500	0.446	0.136	74.7
512	0.452	0.138	73.7
600	0.493	0.15	68.1
700	0.537	0.164	63
800	0.579	0.176	58.9
824	0.588	0.179	58.1
860	0.602	0.184	56.9

External Document Links

Notes