PRODUCT DATASHEET

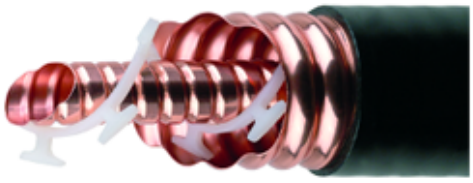
HCA495-50JFN

5" HELIFLEX® Air-Dielectric Coaxial Cable, flame retardant/ halogen free jacket

HELIFLEX® 5" low loss air dielectric cable; flame retardant/ halogen free jacket

FEATURES / 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.



5" HELIFLEX® Air Dielectric Coaxial Cable

Technical features

APPLICATIONS				
Applications		TV & Radio	HF Defense	Cable Solutions
STRUCTURE				
Size		5		
Jacket Option		Black		
Inner Conductor Diameter	mm (in)	45 (1.77)		
Inner Conductor Material		Corrugated Copper Tube		
Dielectric Diameter	mm (in)	98.1 (3.86)		
Dielectric Material		Helical Polyethylene Spacer		
Outer Conductor Diameter	mm (in)	109.3 (4.3)		
Outer Conductor Material		Corrugated Copper		
Jacket Diameter	mm (in)	115.1 (4.53)		
Jacket Material		Polyethylene, PE, Metalhydroxite Filling		
Cable Type		Air-Dielectric, Corrugated		
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	°C(°F)	-25 to 60 (-13 to 140)		
Storage Temperature	°C (°F)	-70 to 85 (-94 to 185)		
Operation Temperature	°C(°F)	-50 to 85 (-58 to 185)		

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ELECTRICAL SPECIFICATIONS

Impedance	Ω	50 +/- 0.5
Maximum Frequency	GHz	1
Velocity	%	97
Capacitance	pF/m (pF/ft)	68 (20.7)
Inductance	uH/m (uH/ft)	0.17 (0.052)
Peak Power Rating	kW	1560
RF Peak Voltage	Volts	12500
Jacket Spark	Volt RMS	8000
Inner Conductor dc Resistance	Ω/1000 m (Ω/1000 ft)	0.31 (0.095)
Outer Conductor dc Resistance	Ω/1000 m (Ω/1000 ft)	0.094 (0.029)
Return Loss (VSWR) Performance		Standard
Min. Return Loss (Max. VSWR)	dB (VSWR)	Typical 20.8dB (1.2 VSWR) or better within the operation bands of most global frequency ranges. Premium also available. Contact factory for options in your specific frequency band.
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)	4.5 (3)
Minimum Bending Radius, Single Bend	mm (in)	500 (20)
Minimum Bending Radius, Repeated Bends	mm (in)	1200 (47)
Bending Moment	Nm (lb-ft)	335 (247)
Tensile Strength	N (lb)	3000 (674)
Recommended / Maximum Clamp Spacing	m (ft)	1 / 2 (3.3 / 6.6)

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

Frequency, MHz	dB per 100m	dB per 100ft	Power, kW
0.5	0.02	0.01	1200
1	0.03	0.01	848
1.5	0.03	0.01	692
2	0.04	0.01	599
10	0.09	0.03	266
20	0.13	0.04	187
30	0.15	0.05	153
50	0.20	0.06	118
88	0.27	0.08	88.30
100	0.28	0.09	82.70
108	0.30	0.09	79.70
150	0.35	0.11	67.30
174	0.38	0.12	62.40
200	0.41	0.12	58.10
300	0.50	0.15	47.10
400	0.59	0.18	40.70
450	0.62	0.19	38.30
500	0.66	0.20	36.30
512	0.67	0.20	35.90
600	0.73	0.22	33.10
700	0.79	0.24	30.50
800	0.85	0.26	28.50
824	0.86	0.26	28.10
894	0.90	0.27	27
900	0.90	0.28	26.90
925	0.92	0.28	26.50
960	0.94	0.29	26
1000	0.96	0.29	25.50

External Document Links

Notes