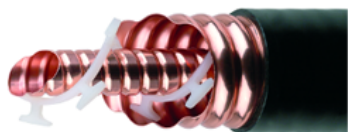


**HCA400-50J****4" HELIFLEX® Air-Dielectric Coaxial Cable**

HELIFLEX® 4" low loss air dielectric cable

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
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STRUCTURE

Cable Type	Air-Dielectric, Corrugated
Size	4
Jacket Option	Black
Inner Conductor Diameter	34.8mm (1.37in)
Inner Conductor Material	Corrugated Copper Tube
Dielectric Diameter	75.3mm (2.96in)
Dielectric Material	Helical Polyethylene Spacer
Outer Conductor Diameter	85.5mm (3.36in)
Outer Conductor Material	Corrugated Copper
Jacket Diameter	90.5mm (3.56in)
Jacket Material	Polyethylene, PE

TESTING AND ENVIRONMENTAL

Fire Performance	Halogene Free
Flame Retardant Jacket Specifications	Meets the requirements according to: IEC60754-1, IEC60754-2
Installation Temperature	-40°C to 60°C (-40°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)



HCA400-50J

4" HELIFLEX® Air-Dielectric Coaxial Cable

ELECTRICAL SPECIFICATIONS

Impedance	50 +/- 0.5 Ω
Maximum Frequency	1.66 GHz
Velocity	96 %
Capacitance	70pF/m (21.3pF/ft)
Inductance	0.175μH/m (0.053μH/ft)
Peak Power Rating	940 kW
RF Peak Voltage	9700 Volts
Jacket Spark	8000 Volt RMS
Inner Conductor dc Resistance	0.43ohm/1000 m (0.13ohm/1000 ft)
Outer Conductor dc Resistance	0.13ohm/1000 m (0.04ohm/1000 ft)
Return Loss (VSWR) Performance	Standard
Phase Stabilized	Phase stabilized and phase matched cables and assemblies are available upon request.

MECHANICAL SPECIFICATIONS

Cable Weight	3.1 kg/m (2.1lb/ft)
Minimum Bending Radius	380mm (15in)
Minimum Bending Radius	890mm (35in)
Bending Moment	215 (159)
Tensile Strength	1800N (405lb)
Recommended / Maximum Clamp Spacing	0.8 / 1.2 (2.75 / 4)



HCA400-50J

4" HELIFLEX® Air-Dielectric Coaxial Cable

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

Frequency, MHz	dB per 100m	dB per 100ft	Power, kW
0.5	0.025	0.008	792
1	0.035	0.011	561
1.5	0.043	0.013	457
2	0.049	0.015	395
10	0.111	0.034	175
20	0.158	0.048	123
30	0.194	0.059	100
50	0.252	0.077	77.4
88	0.338	0.103	57.9
100	0.362	0.11	54.1
108	0.377	0.115	52
150	0.448	0.136	44
174	0.484	0.148	40.8
200	0.521	0.159	38
300	0.648	0.198	30.9
400	0.757	0.231	26.7
450	0.808	0.246	25.1
500	0.856	0.261	23.8
512	0.867	0.264	23.6
600	0.946	0.288	21.8
700	1.03	0.314	20.2
800	1.11	0.339	18.9
824	1.13	0.344	18.6
894	1.18	0.36	18
900	1.19	0.362	17.8
925	1.21	0.367	17.6
960	1.23	0.375	17.3
1000	1.26	0.384	17

External Document Links

Notes