



HELIFLEX® 9" low loss air dielectric cable; high power

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.



9" HELIFLEX® Air Dielectric Coaxial Cable

Technical features

APPLICATIONS

Applications		TV & Radio	HF Defense	Cable Solutions
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STRUCTURE

Size		9
Jacket Option		Black
Inner Conductor	mm (in)	99.4 (3.91)
Inner Conductor Material		Corrugated Copper Tube
Dielectric	mm (in)	216.7 (8.53)
Dielectric Material		Distinct Fluoropolymer Spacer
Outer Conductor	mm (in)	247.7 (9.75)
Outer Conductor Material		Corrugated Aluminium
Jacket Material		N/A
Cable Type		Air-Dielectric, Corrugated

TESTING AND ENVIRONMENTAL

Fire Performance		Flame Retardant, LSOH
Installation Temperature	°C(°F)	-40 to 60 (-40 to 140)
Storage Temperature	°C(°F)	-70 to 85 (-94 to 185)
Operation Temperature	°C(°F)	-50 to 85 (-58 to 185)



ELECTRICAL SPECIFICATIONS

Impedance, Ohm	Ω	50 +/- 0.5
Maximum Frequency	GHz	0.56
Velocity, percent	%	98
Capacitance	pF/m (pF/ft)	68 (20.7)
Inductance, uH/m (uH/ft)	μH/m (μH/ft)	0.17 (0.052)
Peak Power Rating	kW	5800
RF Peak Voltage	Volts	24000
Inner Conductor dc Resistance, Ω/km (Ω/kft)	Ω/1000 m (Ω/1000 ft)	0.11 (0.034)
Outer Conductor dc Resistance, ohm/1000 m (Ohm/1000 ft)	Ω/1000 m (Ω/1000 ft)	0.031 (0.009)
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)	9.6 (6.48)
Minimum Bending Radius, Single Bend	mm (in)	1700 (67)
Tensile Strength	N (lb)	9600 (2158)
Recommended / Maximum Clamp Spacing	m (ft)	1 / 2 (3.3 / 6.6)

**ATTENUATION AND POWER RATING**

Frequency, MHz	dB per 100m	dB per 100ft	Power, kW
0.5	0.01	0.00	5800
1	0.02	0.01	5800
1.5	0.02	0.01	5260
2	0.02	0.01	4550
10	0.05	0.01	2010
20	0.07	0.02	1410
30	0.08	0.03	1140
50	0.11	0.03	880
88	0.15	0.05	655
100	0.16	0.05	611
108	0.16	0.05	585
150	0.20	0.06	493
174	0.21	0.07	454
200	0.23	0.07	422
300	0.29	0.09	337
400	0.35	0.11	287
450	0.38	0.12	268
500	0.41	0.12	252
512	0.41	0.13	249
560	0.44	0.13	236
590	0.46	0.14	228

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