



9" HELIFLEX® Air-Dielectric Coaxial Cable

**Product Description**

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

Application: TV, Broadcast



9" HELIFLEX® Air Dielectric Coaxial Cable

**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 RF/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**

**Structure**

Inner conductor:	Corrugated Copper Tube	[mm (in)]	99.4 (3.91)
Dielectric:	Distinct Fluoropolymer Spacer	[mm (in)]	216.7 (8.53)
Outer conductor:	Corrugated Aluminium	[mm (in)]	247.7 (9.75)
Jacket:		[mm (in)]	

**Mechanical Properties**

Weight, approximately	[kg/m (lb/ft)]	9.6 (6.48)
Minimum bending radius, single bending	[mm (in)]	1700 (67)
Minimum bending radius, repeated bending	[mm (in)]	
Bending moment	[Nm (lb-ft)]	
Max. tensile force	[N (lb)]	9600 (2158)
Recommended / maximum clamp spacing	[m (ft)]	1 / 2 (3.3 / 6.6)

**Electrical Properties**

Characteristic impedance	[Ω]	50 +/- 0.5
Relative propagation velocity	[%]	98
Capacitance	[pF/m (pF/ft)]	68 (20.7)
Inductance	[μH/m (μH/ft)]	0.17 (0.052)
Max. operating frequency	[GHz]	0.56
Jacket spark test RMS	[V]	
Peak power rating	[kW]	5800
RF Peak voltage rating	[V]	24000
DC-resistance inner conductor	[Ω/km (Ω/1000ft)]	0.11 (0.034)
DC-resistance outer conductor	[Ω/km (Ω/1000ft)]	0.031 (0.009)

**Recommended Temperature Range**

Storage temperature	[°C (°F)]	-70 to 85 (-94 to 185 )
Installation temperature	[°C (°F)]	-40 to 60 (-40 to 140 )
Operation temperature	[°C (°F)]	-50 to 85 (-58 to 185 )

**Other Characteristics**

Fire Performance: Flame Retardant, LS0H

VSWR Performance: Standard [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.

Other Options: Phase stabilized and phase matched cables and assemblies are available upon request.

Frequency [ MHz ]	Attenuation		Power [ kW ]
	[ dB/100m ]	[ dB/100ft ]	
0.5	0.0103	0.0031	5800
1.0	0.0146	0.0045	5800
1.5	0.0179	0.0055	5260
2.0	0.0207	0.0063	4550
10	0.0469	0.0143	2010
20	0.0670	0.0204	1410
30	0.0828	0.0252	1140
50	0.108	0.0330	880
88	0.146	0.0446	655
100	0.157	0.0479	611
108	0.164	0.0499	585
150	0.196	0.0599	493
174	0.214	0.0651	454
200	0.231	0.0705	422
300	0.294	0.0895	337
400	0.351	0.107	287
450	0.379	0.115	268
500	0.406	0.124	252
512	0.413	0.126	249
560	0.438	0.134	236
590	0.455	0.139	228

Attenuation at 20°C (68°F) cable temperature  
Mean power rating at 40°C (104°F) ambient temperature

All information contained in the present datasheet is subject to confirmation at time of ordering