## 1-5/8" HELIFLEX<sup>®</sup> Air-Dielectric Coaxial Cable, flame retardant/ halogen free jacket

HELIFLEX® 1-5/8" 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.



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# Technical features

### **APPLICATIONS**

Applications		Wireless Communication	TV & Radio	HF Defense	Mobile Radio	Cable Solutions
STRUCTURE						
Cable Type			Air-Die	electric, Corrugate	d	
Size				1-5/8		
Jacket Option				Black		
Inner Conductor Diameter	mm (in)			18.6 (0.73)		
Inner Conductor Material			Corru	gated Copper Tub	е	
Dielectric Diameter	mm (in)			39.8 (1.56)		
Dielectric Material			Helical	Polyethylene Spac	er	
Outer Conductor Diameter	mm (in)	46.6 (1.83)				
Outer Conductor Material		Corrugated Copper				
Jacket Diameter	mm (in)			50.4 (1.984)		
Jacket Material			Polyethylene	, PE, Metalhydroxi	te 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	°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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Impedance	Ω	50 +/- 0.5
Maximum Frequency	GHz	3
Velocity	%	95
Capacitance	pF/m (pF/ft)	70 (21.3)
Inductance	uH/m (uH/ft)	0.175 (0.053)
Peak Power Rating	kW	270
RF Peak Voltage	Volts	5200
Jacket Spark	Volt RMS	8000
Inner Conductor dc Resistance	Ω/1000 m (Ω/1000 ft)	1.06 (0.33)
Outer Conductor dc Resistance	Ω/1000 m (Ω/1000 ft)	0.39 (0.13)
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 bands
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)	1.3 (0.89)
Minimum Bending Radius, Single Bend	mm (in)	180 (7)
Minimum Bending Radius, Repeated Bends	mm (in)	550 (22)
Bending Moment	Nm (lb-ft)	42 (31)
Tensile Strength	N (lb)	1500 (337)
Recommended / Maximum Clamp Spacing	m (ft)	0.8 / 1.2 (2.75 / 4)

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Frequency, MHz	dB per 100m	dB per 100ft	Power, kW	
0.5	0.04	0.01	270	
1	0.06	0.02	196	
1.5	0.08	0.02	160	
2	0.09	0.03	138	
10	0.20	0.06	61.40	
20	0.28	0.09	43.40	
30	0.34	0.10	35.40	
50	0.44	0.14	27.30	
38	0.59	0.18	20.50	
100	0.63	0.19	19.20	
108	0.66	0.20	18.40	
150	0.78	0.24	15.60	
174	0.84	0.26	14.40	
200	0.90	0.28	13.50	
300	1.11	0.34	11	
400	1.29	0.39	9.44	
450	1.38	0.42	8.83	
500	1.45	0.44	8.41	
512	1.47	0.45	8.30	
500	1.60	0.49	7.64	
700	1.74	0.53	7.03	
300	1.86	0.57	6.59	
324	1.89	0.58	6.49	
394	1.98	0.60	6.20	
900	1.98	0.61	6.20	
925	2.01	0.61	6.11	
960	2.05	0.63	6	
1000	2.10	0.64	5.86	
1250	2.37	0.72	5.21	
1500	2.61	0.80	4.75	
1700	2.80	0.85	4.44	
800	2.89	0.88	4.31	
2000	3.06	0.93	4.08	
2200	3.22	0.98	3.89	
2300	3.30	1.01	3.81	
3000	3.83	1.17	3.32	

**External Document Links** 

Notes

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