



5-1/2" low loss air dielectric cable

**FEATURES / BENEFITS**

**• Low Attenuation**

The low attenuation of air dielectric coaxial cable results in highly efficient signal transfer in your RF system.

**• Complete Shielding**

The solid outer conductor of air dielectric coaxial cable creates a continuous RFI/EMI shield that minimizes system interference.

**• Low VSWR**

Special low VSWR versions of air dielectric coaxial cables contribute to low system noise.

**• Outstanding Intermodulation Performance**

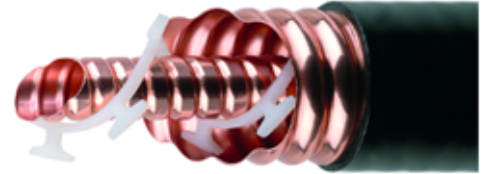
Air dielectric coaxial cable's solid inner and outer conductors virtually eliminate intermods. Intermodulation performance is also confirmed with state-of-the-art equipment at the RFS Technologies factory.

**• High Power Rating**

Due to their low attenuation, outstanding heat transfer properties and temperature stabilized dielectric materials, air dielectric coaxial 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.



5-1/2" Air Dielectric Coaxial Cable

**Technical features**

**APPLICATIONS**

Applications	TV & Radio	HF Defense	Cable Solutions
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**STRUCTURE**

Size		5-1/2
Jacket Option		Black
Inner Conductor Diameter	mm (in)	58 (2.28)
Inner Conductor Material		Corrugated Copper Tube
Dielectric Diameter	mm (in)	127 (5)
Dielectric Material		Helical Polyethylene Spacer
Outer Conductor Diameter	mm (in)	140.5 (5.53)
Outer Conductor Material		Corrugated Copper
Jacket Diameter	mm (in)	147.1 (5.79)
Jacket Material		Polyethylene, PE
Cable Type		Air-Dielectric, Corrugated



**TESTING AND ENVIRONMENTAL**

<b>Fire Performance</b>		Halogene Free
<b>Flame Retardant Jacket Specifications</b>		Meets the requirements according to: IEC60754-1, IEC60754-2
<b>Installation Temperature</b>	°C(°F)	-40 to 60 (-40 to 140)
<b>Storage Temperature</b>	°C (°F)	-70 to 85 (-94 to 185)
<b>Operation Temperature</b>	°C(°F)	-50 to 85 (-58 to 185)

**ELECTRICAL SPECIFICATIONS**

<b>Impedance</b>	Ω	50 +/- 0.5
<b>Maximum Frequency</b>	GHz	0.86
<b>Velocity</b>	%	96
<b>Capacitance</b>	pF/m (pF/ft)	70 (21.3)
<b>Inductance</b>	uH/m (uH/ft)	0.175 (0.053)
<b>Peak Power Rating</b>	kW	2250
<b>RF Peak Voltage</b>	Volts	15000
<b>Jacket Spark</b>	Volt RMS	8000
<b>Inner Conductor dc Resistance</b>	Ω/1000 m (Ω/1000 ft)	0.2 (0.06)
<b>Outer Conductor dc Resistance</b>	Ω/1000 m (Ω/1000 ft)	0.057 (0.017)
<b>Return Loss (VSWR) Performance</b>		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.
<b>Phase Stabilized</b>		Phase stabilized and phase matched cables and assemblies are available upon request.
<b>Temperature &amp; Power</b>		Standard

**MECHANICAL SPECIFICATIONS**

<b>Cable Weight, Nominal</b>	kg/m (lb/ft)	7.5 (5)
<b>Minimum Bending Radius, Single Bend</b>	mm (in)	800 (31)
<b>Minimum Bending Radius, Repeated Bends</b>	mm (in)	1500 (59)
<b>Bending Moment</b>	Nm (lb-ft)	580 (428)
<b>Tensile Strength</b>	N (lb)	4000 (900)
<b>Recommended / Maximum Clamp Spacing</b>	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	1890
1	0.02	0.01	1330
1.5	0.03	0.01	1090
2	0.03	0.01	940
10	0.07	0.02	418
20	0.10	0.03	294
30	0.12	0.04	239
50	0.15	0.05	184
88	0.21	0.06	138
100	0.22	0.07	129
108	0.23	0.07	124
150	0.27	0.08	105
174	0.29	0.09	97.70
200	0.31	0.10	91.10
300	0.39	0.12	74
400	0.46	0.14	64
450	0.49	0.15	60.30
500	0.51	0.16	57.20
512	0.52	0.16	56.50
600	0.57	0.17	52.20
700	0.62	0.19	48.50
800	0.66	0.20	45.40
824	0.67	0.21	44.70
894	0.71	0.22	43

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