



HELICABLE™ 3-1/8" low loss air dielectric

FEATURES

• **VSWR**
HELICABLE™ coaxial cables have low VSWR that contribute to low system performance.

• **Shielding**
HELICABLE™ coaxial cables feature a solid outer conductor which creates a continuous electromagnetic shield that means interference in your system is very low.

• **Attenuation**
HELICABLE™ coaxial cables have low attenuation resulting in extremely efficient transfer of your RF signal.

• **Power Rating**
HELICABLE™ coaxial cables provides long term operating life at high transmission power levels because of low attenuation and heat transfer properties.



3-1/8" HELICABLE™
Air-Dielectric Coaxial Cable

Technical Details

STRUCTURE

Size		3-1/8"
Jacket Option		Black
Inner Conductor Diameter	mm (in)	34.7 (1.37)
Inner Conductor Material		Corrugated copper tube
Dielectric Diameter	mm (in)	75.2 (2.96)
Dielectric Material		Polyethylene Helical strip
Outer Conductor Diameter	mm (in)	85.4 (3.36)
Outer Conductor Material		Corrugated copper tube
Jacket Diameter	mm (in)	91 (3.58)
Jacket Material		Polyethylene, PE
Cable Type		Air-Dielectric, Corrugated

ENVIRONMENTAL

Fire Performance		Halogen Free
Installation Temperature	°C (°F)	-40 to 60 (-40 to 140)
Storage Temperature	°C (°F)	-45 to 85 (-49 to 185)
Operating Temperature	°C (°F)	-45 to 85 (-49 to 185)

**PRODUCT DATASHEET****HJA318-50A****3-1/8" HELICABLE™ Air-Dielectric Coaxial Cable****ELECTRICAL SPECIFICATION**

Impedance	Ω	50 $\pm$ 0.5
Maximum Frequency	GHz	1.55
Velocity	%	96
Capacitance	pF/m	70
Inductance	μ H/m	0.175
Peak Power Rating	kW	940
RF Peak Voltage	kV	9.7
Return loss (VSWR) Performance		Standard
Inner Conductor dc Resistance	Ω /1000m	0.4
Outer Conductor dc Resistance	Ω /1000m	0.15
Min. Return Loss (Max. VSWR)		Typical 20.8dB (1.2 VSWR) or better within the typical operating bands.

MECHANICAL SPECIFICATION

Cable Weight, Nominal	Kg/m	3.54
Minimum Bending Radius, Single Bend	mm (in)	380 (15)
Minimum Bending Radius, Repeated Bend	mm (in)	1100 (43)
Bending Moment	Nm	215
Tensile Strength	N	180
Recommended / Maximum Clamp Spacing	m (ft)	0.8 / 1.2 (2.6 / 3.9)
Maximum Hoisting Grip Spacing	m (ft)	61 (200)

**PRODUCT DATASHEET****HJA318-50A**

3-1/8" HELICABLE™ Air-Dielectric Coaxial Cable

ATTENUATION @ 20°C AND POWER RATING @ 40°C

Frequency, MHz	dB per 100m	dB per 100ft	Power, kW
0.5	0.03	0.01	790
1	0.04	0.01	560
1.5	0.04	0.01	440
2	0.05	0.02	300
10	0.11	0.03	175
20	0.16	0.05	123
30	0.19	0.06	103
50	0.25	0.08	79
88	0.34	0.1	58.3
100	0.36	0.11	55.2
108	0.38	0.12	52.5
150	0.45	0.14	44.3
174	0.48	0.15	41.1
200	0.52	0.16	38.3
300	0.65	0.2	31.2
400	0.76	0.23	27
450	0.81	0.25	25.4
500	0.86	0.26	24.1
512	0.87	0.27	23.9
600	0.95	0.29	22.0
700	1.03	0.31	20.4
800	1.11	0.34	19.1
824	1.13	0.34	18.8
894	1.18	0.36	18
900	1.19	0.36	17.8
925	1.21	0.37	17.5
960	1.23	0.37	17.2
1000	1.26	0.38	16.8