



HJ9-50, HELIAX® Standard Air Dielectric Coaxial Cable, corrugated copper, 5 in, black PE jacket

## Product Classification

<b>Product Type</b>	Air coaxial cable
<b>Product Brand</b>	HELIAX®
<b>Product Series</b>	HJ9-50

## General Specifications

<b>Flexibility</b>	Standard
<b>Jacket Color</b>	Black

## Dimensions

<b>Diameter Over Jacket</b>	132.08 mm   5.2 in
<b>Inner Conductor OD</b>	51.308 mm   2.02 in
<b>Outer Conductor OD</b>	127 mm   5 in
<b>Nominal Size</b>	5 in
<b>Cable Volume</b>	10,869.651 L/km   117 ft³/kft

## Electrical Specifications

<b>Cable Impedance</b>	50 ohm ±0.5 ohm
<b>Capacitance</b>	71.194 pF/m   21.7 pF/ft
<b>dc Resistance, Inner Conductor</b>	0.328 ohms/km   0.1 ohms/kft
<b>dc Resistance, Outer Conductor</b>	0.131 ohms/km   0.04 ohms/kft
<b>dc Test Voltage</b>	27500 V
<b>Inductance</b>	1.87 µH/m   0.57 µH/ft
<b>Insulation Resistance</b>	100000 MOhms-km
<b>Jacket Spark Test Voltage (rms)</b>	12000 V

<b>Operating Frequency Band</b>	1 – 960 MHz
<b>Peak Power</b>	1890 kW
<b>Power Attenuation</b>	6.661
<b>Velocity</b>	93 %

## Attenuation

<b>Frequency (MHz)</b>	<b>Attenuation (dB/100 m)</b>	<b>Attenuation (dB/100 ft)</b>	<b>Average Power (kW)</b>
1.0	0.024	0.007	898.9
1.5	0.03	0.009	732.78
2.0	0.034	0.011	633.76
10.0	0.078	0.024	279.96
20.0	0.111	0.034	196.17
30.0	0.137	0.042	159.06
50.0	0.179	0.055	121.87
85.0	0.237	0.072	92.12
88.0	0.242	0.074	90.44
100.0	0.259	0.079	84.49
108.0	0.269	0.082	81.09
150.0	0.322	0.098	67.97
174.0	0.348	0.106	62.72
200.0	0.376	0.115	58.14
204.0	0.38	0.116	57.51
300.0	0.47	0.143	46.51
400.0	0.552	0.168	39.6
450.0	0.59	0.18	37.06
460.0	0.597	0.182	36.6
500.0	0.626	0.191	34.91
512.0	0.635	0.193	34.44
600.0	0.695	0.212	31.45
700.0	0.759	0.231	28.78
800.0	0.821	0.25	26.62
824.0	0.835	0.255	26.17
894.0	0.876	0.267	24.95
960.0	0.914	0.278	23.92

## Material Specifications

<b>Dielectric Material</b>	PE
<b>Jacket Material</b>	PE
<b>Inner Conductor Material</b>	Copper tube
<b>Outer Conductor Material</b>	Corrugated copper

## Mechanical Specifications

<b>Minimum Bend Radius, multiple Bends</b>	1270 mm   50 in
<b>Number of Bends, minimum</b>	15
<b>Number of Bends, typical</b>	30
<b>Tensile Strength</b>	454 kg   1,000.897 lb
<b>Bending Moment</b>	200 ft lb   271.164 N-m
<b>Flat Plate Crush Strength</b>	4.911 kg/mm   275 lb/in
<b>Pressurization, maximum</b>	0.207 N/mm <sup>2</sup>   30 psi

## Environmental Specifications

<b>Installation temperature</b>	-40 °C to +60 °C (-40 °F to +140 °F)
<b>Operating Temperature</b>	-40 °C to +85 °C (-40 °F to +185 °F)
<b>Storage Temperature</b>	-70 °C to +85 °C (-94 °F to +185 °F)
<b>Attenuation, Ambient Temperature</b>	68 °F   20 °C
<b>Average Power, Ambient Temperature</b>	104 °F   40 °C
<b>Average Power, Inner Conductor Temperature</b>	212 °F   100 °C

## Packaging and Weights

<b>Cable weight</b>	4.911 kg/m   3.3 lb/ft
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## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system

