

# HJ8-50B

HJ8-50B, HELIAX® Standard Air Dielectric Coaxial Cable, corrugated copper, 3 in, black PE jacket



**OBSOLETE**

## Product Classification

<b>Product Type</b>	Air coaxial cable
<b>Product Brand</b>	HELIAX®
<b>Product Series</b>	HJ8-50B

## General Specifications

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

## Dimensions

<b>Diameter Over Jacket</b>	76.454 mm   3.01 in
<b>Inner Conductor OD</b>	28.956 mm   1.14 in
<b>Outer Conductor OD</b>	72.39 mm   2.85 in
<b>Nominal Size</b>	3 in
<b>Cable Volume</b>	3,409.54 L/km   36.7 ft³/kft

## Electrical Specifications

<b>Cable Impedance</b>	50 ohm $\pm$ 0.5 ohm
<b>Capacitance</b>	71.194 pF/m   21.7 pF/ft
<b>dc Resistance, Inner Conductor</b>	0.492 ohms/km   0.15 ohms/kft
<b>dc Resistance, Outer Conductor</b>	0.23 ohms/km   0.07 ohms/kft
<b>dc Test Voltage</b>	16000 V
<b>Inductance</b>	0.187 $\mu$ H/m   0.057 $\mu$ H/ft

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<b>Insulation Resistance</b>	100000 MOhms-km
<b>Jacket Spark Test Voltage (rms)</b>	10000 V
<b>Operating Frequency Band</b>	1 – 1640 MHz
<b>Peak Power</b>	640 kW
<b>Power Attenuation</b>	5.997
<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	0.041	0.013	475.58
1.5	0.051	0.015	387.14
2.0	0.059	0.018	334.42
10.0	0.135	0.041	146.13
20.0	0.194	0.059	101.59
30.0	0.24	0.073	81.89
50.0	0.316	0.096	62.17
85.0	0.424	0.129	46.44
88.0	0.432	0.132	45.55
100.0	0.464	0.141	42.41
108.0	0.484	0.148	40.62
150.0	0.584	0.178	33.72
174.0	0.635	0.194	30.97
200.0	0.689	0.21	28.57
204.0	0.697	0.212	28.24
300.0	0.874	0.266	22.51
400.0	1.039	0.317	18.93
450.0	1.117	0.34	17.62
460.0	1.132	0.345	17.38
500.0	1.191	0.363	16.52
512.0	1.209	0.368	16.28
600.0	1.334	0.407	14.75
700.0	1.47	0.448	13.38
800.0	1.6	0.488	12.29
824.0	1.631	0.497	12.06
894.0	1.719	0.524	11.45

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<b>960.0</b>	1.8	0.549	10.93
<b>1000.0</b>	1.848	0.563	10.65
<b>1218.0</b>	2.103	0.641	9.35
<b>1250.0</b>	2.14	0.652	9.2
<b>1500.0</b>	2.417	0.737	8.14

## Material Specifications

<b>Dielectric Material</b>	PP
<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>	762 mm   30 in
<b>Number of Bends, minimum</b>	15
<b>Number of Bends, typical</b>	25
<b>Tensile Strength</b>	340 kg   749.571 lb
<b>Bending Moment</b>	30 ft lb   40.675 N-m
<b>Flat Plate Crush Strength</b>	3.125 kg/mm   175 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>	250 °F   121.111 °C

## Packaging and Weights

<b>Cable weight</b>	2.649 kg/m   1.78 lb/ft
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## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
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ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
REACH-SVHC	Compliant as per SVHC revision on <a href="http://www.commscope.com/ProductCompliance">www.commscope.com/ProductCompliance</a>
ROHS	Compliant
UK-ROHS	Compliant

