

# HJ8-50B



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

## Product Classification

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

## Construction Materials

<b>Jacket Material</b>	PE
<b>Dielectric Material</b>	PP
<b>Flexibility</b>	Standard
<b>Inner Conductor Material</b>	Copper tube
<b>Jacket Color</b>	Black
<b>Outer Conductor Material</b>	Corrugated copper

## Dimensions

<b>Nominal Size</b>	3 in
<b>Cable Volume</b>	36.7 ft <sup>3</sup> /kft   3409.4 L/km
<b>Cable Weight</b>	2.65 kg/m   1.78 lb/ft
<b>Diameter Over Jacket</b>	76.454 mm   3.010 in
<b>Inner Conductor OD</b>	28.9560 mm   1.1400 in
<b>Outer Conductor OD</b>	72.390 mm   2.850 in

## Electrical Specifications

<b>Cable Impedance</b>	50 ohm ±0.5 ohm
<b>Capacitance</b>	21.7 pF/ft   71.2 pF/m
<b>dc Resistance, Inner Conductor</b>	0.492 ohms/km   0.150 ohms/kft
<b>dc Resistance, Outer Conductor</b>	0.229 ohms/km   0.070 ohms/kft
<b>dc Test Voltage</b>	16000 V
<b>Inductance</b>	1.870 µH/m   0.570 µH/ft
<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>	640.0 kW
<b>Power Attenuation</b>	5.997
<b>Velocity</b>	93%

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## 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)

## Mechanical Specifications

<b>Bending Moment</b>	40.7 N-m   30.0 ft lb
<b>Flat Plate Crush Strength</b>	175.0 lb/in   3.1 kg/mm
<b>Minimum Bend Radius, Multiple Bends</b>	762.00 mm   30.00 in
<b>Number of Bends, minimum</b>	15
<b>Number of Bends, typical</b>	25
<b>Pressurization, maximum</b>	0 N/mm <sup>2</sup>   30 psi
<b>Tensile Strength</b>	340 kg   750 lb

## Note

<b>Performance Note</b>	Values typical, unless otherwise stated
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## Standard Conditions

<b>Attenuation, Ambient Temperature</b>	20 °C   68 °F
<b>Average Power, Ambient Temperature</b>	40 °C   104 °F
<b>Average Power, Inner Conductor Temperature</b>	121 °C   250 °F

## Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
0.5	0.029	0.009	640.00
1	0.041	0.013	475.54
1.5	0.051	0.015	387.10
2	0.059	0.018	334.39
10	0.135	0.041	146.12
20	0.194	0.059	101.58
30	0.24	0.073	81.88
50	0.317	0.096	62.16
85	0.424	0.129	46.43
88	0.432	0.132	45.55
100	0.464	0.141	42.41
108	0.484	0.148	40.62
150	0.584	0.178	33.72
174	0.635	0.194	30.96
200	0.689	0.21	28.56
204	0.697	0.212	28.24
300	0.874	0.266	22.50
400	1.039	0.317	18.93
450	1.117	0.34	17.62
500	1.192	0.363	16.51
512	1.209	0.369	16.27
600	1.335	0.407	14.74
700	1.47	0.448	13.38
800	1.601	0.488	12.29
824	1.631	0.497	12.06
894	1.719	0.524	11.45
960	1.8	0.549	10.93
1000	1.849	0.563	10.64
1218	2.104	0.641	9.35
1250	2.14	0.652	9.19
1500	2.418	0.737	8.14

## Regulatory Compliance/Certifications

Agency	Classification
ISO 9001:2008	Designed, manufactured and/or distributed under this quality management system