



HJ11-50, HELIAX® Standard Air Dielectric Coaxial Cable, corrugated copper, 4 in, black PE jacket

## Product Classification

<b>Product Type</b>	Air coaxial cable
<b>Product Brand</b>	HELIAX®
<b>Product Series</b>	HJ11-50

## General Specifications

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

## Dimensions

<b>Diameter Over Jacket</b>	101.6 mm   4 in
<b>Inner Conductor OD</b>	39.37 mm   1.55 in
<b>Outer Conductor OD</b>	97.536 mm   3.84 in
<b>Nominal Size</b>	4 in
<b>Cable Volume</b>	6,493.92 L/km   69.9 ft³/kft

## Electrical Specifications

<b>Cable Impedance</b>	50 ohm ±0.5 ohm
<b>Capacitance</b>	72.178 pF/m   22 pF/ft
<b>dc Resistance, Inner Conductor</b>	0.361 ohms/km   0.11 ohms/kft
<b>dc Resistance, Outer Conductor</b>	0.131 ohms/km   0.04 ohms/kft
<b>dc Test Voltage</b>	21000 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>	10000 V

<b>Operating Frequency Band</b>	1 – 1000 MHz
<b>Peak Power</b>	1100 kW
<b>Power Attenuation</b>	7.398
<b>Velocity</b>	92 %

## Attenuation

<b>Frequency (MHz)</b>	<b>Attenuation (dB/100 m)</b>	<b>Attenuation (dB/100 ft)</b>	<b>Average Power (kW)</b>
1.0	0.034	0.01	704.93
1.5	0.042	0.013	574.27
2.0	0.049	0.015	496.39
10.0	0.111	0.034	218.18
20.0	0.159	0.049	152.31
30.0	0.197	0.06	123.16
50.0	0.258	0.079	93.96
85.0	0.344	0.105	70.62
88.0	0.35	0.107	69.31
100.0	0.375	0.114	64.64
108.0	0.392	0.119	61.98
150.0	0.469	0.143	51.71
174.0	0.51	0.155	47.61
200.0	0.551	0.168	44.03
204.0	0.557	0.17	43.54
300.0	0.694	0.212	34.96
400.0	0.82	0.25	29.59
450.0	0.879	0.268	27.62
460.0	0.89	0.271	27.26
500.0	0.935	0.285	25.95
512.0	0.948	0.289	25.59
600.0	1.043	0.318	23.28
700.0	1.144	0.349	21.21
800.0	1.241	0.378	19.56
824.0	1.264	0.385	19.21
894.0	1.329	0.405	18.27
960.0	1.388	0.423	17.48
1000.0	1.424	0.434	17.04

## 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>	1016 mm   40 in
<b>Number of Bends, minimum</b>	15
<b>Number of Bends, typical</b>	30
<b>Tensile Strength</b>	408 kg   899.485 lb
<b>Bending Moment</b>	191 ft lb   258.961 N-m
<b>Flat Plate Crush Strength</b>	5 kg/mm   280 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>	3.72 kg/m   2.5 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

