

# HJ11-50



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

## Product Classification

<b>Brand</b>	HELIAX®
<b>Product Series</b>	HJ11-50
<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>	4 in
<b>Cable Volume</b>	69.9 ft <sup>3</sup> /kft   6493.7 L/km
<b>Cable Weight</b>	3.72 kg/m   2.50 lb/ft
<b>Diameter Over Jacket</b>	101.600 mm   4.000 in
<b>Inner Conductor OD</b>	39.3700 mm   1.5500 in
<b>Outer Conductor OD</b>	97.536 mm   3.840 in

## Electrical Specifications

<b>Cable Impedance</b>	50 ohm ±0.5 ohm
<b>Capacitance</b>	22.0 pF/ft   72.2 pF/m
<b>dc Resistance, Inner Conductor</b>	0.361 ohms/km   0.110 ohms/kft
<b>dc Resistance, Outer Conductor</b>	0.131 ohms/km   0.040 ohms/kft
<b>dc Test Voltage</b>	21000 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 – 1000 MHz
<b>Peak Power</b>	1100.0 kW
<b>Power Attenuation</b>	7.398
<b>Velocity</b>	92%

# HJ11-50

---

## 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>	259.0 N-m   191.0 ft lb
<b>Flat Plate Crush Strength</b>	280.0 lb/in   5.0 kg/mm
<b>Minimum Bend Radius, Multiple Bends</b>	1016.00 mm   40.00 in
<b>Number of Bends, minimum</b>	15
<b>Number of Bends, typical</b>	30
<b>Pressurization, maximum</b>	0 N/mm <sup>2</sup>   30 psi
<b>Tensile Strength</b>	408 kg   900 lb

## Note

<b>Performance Note</b>	Values typical, unless otherwise stated
-------------------------	-----------------------------------------

## 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	0.024	0.007	999.85
1	0.034	0.01	704.91
1.5	0.042	0.013	574.25
2	0.049	0.015	496.37
10	0.111	0.034	218.15
20	0.159	0.049	152.28
30	0.197	0.06	123.13
50	0.258	0.079	93.93
85	0.344	0.105	70.60
88	0.35	0.107	69.28
100	0.376	0.114	64.62
108	0.392	0.119	61.95
150	0.47	0.143	51.68
174	0.51	0.155	47.58
200	0.552	0.168	44.00
204	0.558	0.17	43.52
300	0.695	0.212	34.94
400	0.821	0.25	29.57
450	0.88	0.268	27.60
500	0.936	0.285	25.93
512	0.949	0.289	25.57
600	1.044	0.318	23.26
700	1.145	0.349	21.19
800	1.242	0.379	19.54
824	1.265	0.386	19.19
894	1.33	0.405	18.25
960	1.39	0.424	17.46
1000	1.426	0.435	17.03

\* Values typical, guaranteed within 5%

## Regulatory Compliance/Certifications

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

