

# Product Specifications

HJ11-50

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



## CHARACTERISTICS

### Construction Materials

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

### Dimensions

Nominal Size	4 in
Cable Volume	69.9 ft <sup>3</sup> /kft   6493.7 L/km
Cable Weight	3.72 kg/m   2.50 lb/ft
Diameter Over Jacket	101.600 mm   4.000 in
Inner Conductor OD	39.370 mm   1.550 in
Outer Conductor OD	97.536 mm   3.840 in

### Electrical Specifications

Cable Impedance	50 ohm $\pm$ 0.5 ohm
Capacitance	22 pF/ft   72 pF/m
dc Resistance, Inner Conductor	0.361 ohms/km   0.110 ohms/kft
dc Resistance, Outer Conductor	0.131 ohms/km   0.040 ohms/kft
dc Test Voltage	21000 V
Inductance	1.870 $\mu$ H/m   0.570 $\mu$ H/ft
Insulation Resistance	100000 mOhm
Jacket Spark Test Voltage (rms)	10000 V
Operating Frequency Band	1 – 1000 MHz
Peak Power	1100.0 kW
Power Attenuation	7.485
Velocity	92%

### Environmental Specifications

Installation Temperature	-40 °C to +60 °C (-40 °F to +140 °F)
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Operating Temperature -40 °C to +85 °C (-40 °F to +185 °F)  
Storage Temperature -70 °C to +85 °C (-94 °F to +185 °F)

## General Specifications

Brand HELIAX®

## Mechanical Specifications

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

## Standard Conditions

Attenuation, Ambient Temperature 20 °C | 68 °F  
Average Power, Ambient Temperature 40 °C | 104 °F  
Average Power, Inner Conductor Temperature 121 °C | 250 °F

## Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
0.5	0.023	0.007	1048.73
1	0.033	0.01	738.97
1.5	0.041	0.012	601.75
2	0.047	0.014	519.96
10	0.108	0.033	227.80
20	0.155	0.047	158.66
30	0.192	0.058	128.07
50	0.252	0.077	97.44
88	0.343	0.105	71.61
100	0.368	0.112	66.72
108	0.384	0.117	63.93
150	0.462	0.141	53.19
174	0.502	0.153	48.90
200	0.544	0.166	45.16
300	0.688	0.21	35.70
400	0.816	0.249	30.11
450	0.875	0.267	28.06
500	0.933	0.284	26.33
512	0.946	0.288	25.95
600	1.043	0.318	23.56
700	1.147	0.349	21.42
800	1.246	0.38	19.70
824	1.27	0.387	19.34
894	1.337	0.407	18.37
960	1.399	0.426	17.56

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1000

1.435

0.437

17.11

