

# HJ7-50A



HJ7-50A, HELIAX® Standard Air Dielectric Coaxial Cable, corrugated copper, 1-5/8 in, black PE jacket

## Product Classification

<b>Brand</b>	HELIAX®
<b>Product Series</b>	HJ7-50A
<b>Product Type</b>	Air coaxial cable

## Construction Materials

<b>Jacket Material</b>	PE
<b>Dielectric Material</b>	PE
<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>	1-5/8 in
<b>Cable Volume</b>	14.0 ft <sup>3</sup> /kft   1300.6 L/km
<b>Cable Weight</b>	1.55 kg/m   1.04 lb/ft
<b>Diameter Over Jacket</b>	50.292 mm   1.980 in
<b>Inner Conductor OD</b>	18.0340 mm   0.7100 in
<b>Outer Conductor OD</b>	46.482 mm   1.830 in

## Electrical Specifications

<b>Cable Impedance</b>	50 ohm ±0.5 ohm
<b>Capacitance</b>	22.1 pF/ft   72.5 pF/m
<b>dc Resistance, Inner Conductor</b>	0.722 ohms/km   0.220 ohms/kft
<b>dc Resistance, Outer Conductor</b>	0.328 ohms/km   0.100 ohms/kft
<b>dc Test Voltage</b>	11000 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 – 2700 MHz
<b>Peak Power</b>	305.0 kW
<b>Power Attenuation</b>	3.356
<b>Velocity</b>	92 %

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## Environmental Specifications

<b>Installation Temperature</b>	-40 °C to +60 °C (-40 °F to +140 °F)
<b>Operating Temperature</b>	-55 °C to +85 °C (-67 °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>	508.00 mm   20.00 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>	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>	100 °C   212 °F

## Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
0.5	0.045	0.014	243.45
1	0.064	0.02	171.92
1.5	0.079	0.024	140.23
2	0.091	0.028	121.34
10	0.204	0.062	53.85
20	0.291	0.089	37.86
30	0.358	0.109	30.77
50	0.465	0.142	23.67
85	0.612	0.187	17.99
88	0.623	0.19	17.67
100	0.666	0.203	16.53
108	0.693	0.211	15.88
150	0.824	0.251	13.37
174	0.891	0.271	12.36
200	0.959	0.292	11.48
204	0.969	0.295	11.36
300	1.19	0.363	9.25
400	1.389	0.423	7.92
450	1.481	0.451	7.43
460	1.499	0.457	7.35
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500	1.569	0.478	7.02
512	1.589	0.484	6.93
600	1.733	0.528	6.35
700	1.887	0.575	5.84
800	2.032	0.619	5.42
824	2.066	0.63	5.33
894	2.162	0.659	5.09
960	2.25	0.686	4.89
1000	2.302	0.702	4.78
1218	2.573	0.784	4.28
1250	2.611	0.796	4.22
1500	2.898	0.883	3.80
1700	3.114	0.949	3.54
1794	3.213	0.979	3.43
1800	3.219	0.981	3.42
2000	3.422	1.043	3.22
2100	3.521	1.073	3.13
2200	3.619	1.103	3.04
2300	3.714	1.132	2.96
2500	3.902	1.189	2.82
2700	4.084	1.245	2.70

\* Values typical, guaranteed within 5%

## Regulatory Compliance/Certifications

**Agency**

RoHS 2011/65/EU

ISO 9001:2015

China RoHS SJ/T 11364-2014

**Classification**

Compliant by Exemption

Designed, manufactured and/or distributed under this quality management system

Above Maximum Concentration Value (MCV)

