

HJ7-50A

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



Product Classification

Product Type	Air coaxial cable
Product Brand	HELIAX®
Product Series	HJ7-50A

General Specifications

Flexibility	Standard
Jacket Color	Black

Dimensions

Diameter Over Jacket	1.98 in 50.292 mm
Inner Conductor OD	0.71 in 18.034 mm
Outer Conductor OD	1.83 in 46.482 mm
Nominal Size	1-5/8 in
Cable Volume	14 ft ³ /kft 1,298.888 L/km

Electrical Specifications

Attenuation, Ambient Temperature	68 °F 20 °C
Cable Impedance	50 ohm ±0.5 ohm
Capacitance	22.1 pF/ft 72.507 pF/m
dc Resistance, Inner Conductor	0.22 ohms/kft 0.722 ohms/km
dc Resistance, Outer Conductor	0.1 ohms/kft 0.328 ohms/km
dc Test Voltage	11000 V
Inductance	0.57 µH/ft 1.87 µH/m
Insulation Resistance	100000 Mohms•km
Jacket Spark Test Voltage (rms)	10000 V

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Operating Frequency Band	1 – 2700 MHz
Peak Power	305 kW
Power Attenuation	3.356
Velocity	92 %

Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
1.0	0.064	0.02	171.93
1.5	0.079	0.024	140.24
2.0	0.091	0.028	121.35
10.0	0.204	0.062	53.85
20.0	0.291	0.089	37.86
30.0	0.358	0.109	30.78
50.0	0.465	0.142	23.68
85.0	0.612	0.187	17.99
88.0	0.623	0.19	17.67
100.0	0.666	0.203	16.53
108.0	0.693	0.211	15.88
150.0	0.824	0.251	13.37
174.0	0.89	0.271	12.37
200.0	0.959	0.292	11.49
204.0	0.969	0.295	11.37
300.0	1.19	0.363	9.26
400.0	1.389	0.423	7.93
450.0	1.48	0.451	7.44
460.0	1.498	0.457	7.35
500.0	1.568	0.478	7.02
512.0	1.588	0.484	6.93
600.0	1.732	0.528	6.36
700.0	1.886	0.575	5.84
800.0	2.031	0.619	5.42
824.0	2.064	0.629	5.33
894.0	2.16	0.658	5.1
960.0	2.248	0.685	4.9
1000.0	2.3	0.701	4.79
1218.0	2.571	0.784	4.28

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1250.0	2.609	0.795	4.22
1500.0	2.895	0.882	3.8
1700.0	3.112	0.948	3.54
1794.0	3.21	0.978	3.43
1800.0	3.216	0.98	3.42
2000.0	3.419	1.042	3.22
2100.0	3.518	1.072	3.13
2200.0	3.615	1.102	3.05
2300.0	3.711	1.131	2.97
2500.0	3.898	1.188	2.83
2700.0	4.08	1.243	2.7

Material Specifications

Dielectric Material	PE
Jacket Material	PE
Inner Conductor Material	Copper tube
Outer Conductor Material	Corrugated copper

Mechanical Specifications

Minimum Bend Radius, multiple Bends	20 in 508 mm
Number of Bends, minimum	15
Number of Bends, typical	30
Tensile Strength	340 kg 749.571 lb
Bending Moment	30 ft lb 40.675 N-m
Flat Plate Crush Strength	175 lb/in 3.125 kg/mm
Pressurization, maximum	30 psi 0.207 N/mm ²

Environmental Specifications

Installation temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Operating Temperature	-55 °C to +85 °C (-67 °F to +185 °F)
Storage Temperature	-70 °C to +85 °C (-94 °F to +185 °F)
Average Power, Ambient Temperature	104 °F 40 °C
Average Power, Inner Conductor Temperature	212 °F 100 °C

Packaging and Weights

HJ7-50A

Cable weight

1.04 lb/ft | 0.144 kg/m

Regulatory Compliance/Certifications

Agency

Classification

CHINA-ROHS

Below maximum concentration value

ISO 9001:2015

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

REACH-SVHC

Compliant as per SVHC revision on www.commscope.com/ProductCompliance

ROHS

Compliant

