



HJ8-50B, HELIAX® Standard Air Dielectric Coaxial Cable, corrugated copper, 3 in, black PE jacket

Product Classification

Product Type	Air coaxial cable
Product Brand	HELIAX®
Product Series	HJ8-50B

General Specifications

Flexibility	Standard
Jacket Color	Black

Dimensions

Diameter Over Jacket	76.454 mm 3.01 in
Inner Conductor OD	28.956 mm 1.14 in
Outer Conductor OD	72.39 mm 2.85 in
Nominal Size	3 in
Cable Volume	3,409.54 L/km 36.7 ft ³ /kft

Electrical Specifications

Cable Impedance	50 ohm ±0.5 ohm
Capacitance	71.194 pF/m 21.7 pF/ft
dc Resistance, Inner Conductor	0.492 ohms/km 0.15 ohms/kft
dc Resistance, Outer Conductor	0.23 ohms/km 0.07 ohms/kft
dc Test Voltage	16000 V
Inductance	1.87 µH/m 0.57 µH/ft
Insulation Resistance	100000 MOhms-km
Jacket Spark Test Voltage (rms)	10000 V

Operating Frequency Band	1 – 1640 MHz
Peak Power	640 kW
Power Attenuation	5.997
Velocity	93 %

Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
1.0	0.041	0.013	475.58
1.5	0.051	0.015	387.14
2.0	0.059	0.018	334.42
10.0	0.135	0.041	146.13
20.0	0.194	0.059	101.59
30.0	0.24	0.073	81.89
50.0	0.316	0.096	62.17
85.0	0.424	0.129	46.44
88.0	0.432	0.132	45.55
100.0	0.464	0.141	42.41
108.0	0.484	0.148	40.62
150.0	0.584	0.178	33.72
174.0	0.635	0.194	30.97
200.0	0.689	0.21	28.57
204.0	0.697	0.212	28.24
300.0	0.874	0.266	22.51
400.0	1.039	0.317	18.93
450.0	1.117	0.34	17.62
460.0	1.132	0.345	17.38
500.0	1.191	0.363	16.52
512.0	1.209	0.368	16.28
600.0	1.334	0.407	14.75
700.0	1.47	0.448	13.38
800.0	1.6	0.488	12.29
824.0	1.631	0.497	12.06
894.0	1.719	0.524	11.45
960.0	1.8	0.549	10.93
1000.0	1.848	0.563	10.65

1218.0	2.103	0.641	9.35
1250.0	2.14	0.652	9.2
1500.0	2.417	0.737	8.14

Material Specifications

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

Mechanical Specifications

Minimum Bend Radius, multiple Bends	762 mm 30 in
Number of Bends, minimum	15
Number of Bends, typical	25
Tensile Strength	340 kg 749.571 lb
Bending Moment	30 ft lb 40.675 N-m
Flat Plate Crush Strength	3.125 kg/mm 175 lb/in
Pressurization, maximum	0.207 N/mm ² 30 psi

Environmental Specifications

Installation temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Operating Temperature	-40 °C to +85 °C (-40 °F to +185 °F)
Storage Temperature	-70 °C to +85 °C (-94 °F to +185 °F)
Attenuation, Ambient Temperature	68 °F 20 °C
Average Power, Ambient Temperature	104 °F 40 °C
Average Power, Inner Conductor Temperature	250 °F 121.111 °C

Packaging and Weights

Cable weight	2.649 kg/m 1.78 lb/ft
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Regulatory Compliance/Certifications

Agency	Classification
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

