

HJ8-50B



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

Product Classification

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

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	3 in
Cable Volume	36.7 ft ³ /kft 3409.4 L/km
Cable Weight	2.65 kg/m 1.78 lb/ft
Diameter Over Jacket	76.454 mm 3.010 in
Inner Conductor OD	28.9560 mm 1.1400 in
Outer Conductor OD	72.390 mm 2.850 in

Electrical Specifications

Cable Impedance	50 ohm ±0.5 ohm
Capacitance	21.7 pF/ft 71.2 pF/m
dc Resistance, Inner Conductor	0.492 ohms/km 0.150 ohms/kft
dc Resistance, Outer Conductor	0.229 ohms/km 0.070 ohms/kft
dc Test Voltage	16000 V
Inductance	1.870 µH/m 0.570 µH/ft
Insulation Resistance	100000 Mohms•km
Jacket Spark Test Voltage (rms)	10000 V
Operating Frequency Band	1 – 1640 MHz
Peak Power	640.0 kW
Power Attenuation	5.997
Velocity	93%

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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)

Mechanical Specifications

Bending Moment	40.7 N-m 30.0 ft lb
Flat Plate Crush Strength	175.0 lb/in 3.1 kg/mm
Minimum Bend Radius, Multiple Bends	762.00 mm 30.00 in
Number of Bends, minimum	15
Number of Bends, typical	25
Pressurization, maximum	0 N/mm ² 30 psi
Tensile Strength	340 kg 750 lb

Note

Performance Note	Values typical, unless otherwise stated
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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	0.029	0.009	640.00
1	0.041	0.013	475.54
1.5	0.051	0.015	387.10
2	0.059	0.018	334.39
10	0.135	0.041	146.12
20	0.194	0.059	101.58
30	0.24	0.073	81.88
50	0.317	0.096	62.16
85	0.424	0.129	46.43
88	0.432	0.132	45.55
100	0.464	0.141	42.41
108	0.484	0.148	40.62
150	0.584	0.178	33.72
174	0.635	0.194	30.96
200	0.689	0.21	28.56
204	0.697	0.212	28.24
300	0.874	0.266	22.50
400	1.039	0.317	18.93
450	1.117	0.34	17.62
500	1.192	0.363	16.51
512	1.209	0.369	16.27
600	1.335	0.407	14.74
700	1.47	0.448	13.38
800	1.601	0.488	12.29
824	1.631	0.497	12.06
894	1.719	0.524	11.45
960	1.8	0.549	10.93
1000	1.849	0.563	10.64
1218	2.104	0.641	9.35
1250	2.14	0.652	9.19
1500	2.418	0.737	8.14

Regulatory Compliance/Certifications

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

