



HJ11-50

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

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 ³ /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	39.3700 mm 1.5500 in
Outer Conductor OD	97.536 mm 3.840 in

Electrical Specifications

Cable Impedance	50 ohm \pm 0.5 ohm
Capacitance	22.0 pF/ft 72.2 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 μ H/m 0.570 μ H/ft
Insulation Resistance	100000 Mohms•km
Jacket Spark Test Voltage (rms)	10000 V
Operating Frequency Band	1 – 1000 MHz
Peak Power	1100.0 kW
Power Attenuation	7.398
Velocity	92%

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)

General Specifications

Brand	HELIAX®
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Mechanical Specifications

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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 ² 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	0.024	0.007	999.85
1	0.034	0.01	704.91
1.5	0.042	0.013	574.25
2	0.049	0.015	496.37
10	0.111	0.034	218.15
20	0.159	0.049	152.28
30	0.197	0.06	123.13
50	0.258	0.079	93.93
88	0.35	0.107	69.28
100	0.376	0.114	64.62
108	0.392	0.119	61.95
150	0.47	0.143	51.68
174	0.51	0.155	47.58
200	0.552	0.168	44.00
300	0.695	0.212	34.94
400	0.821	0.25	29.57
450	0.88	0.268	27.60
500	0.936	0.285	25.93
512	0.949	0.289	25.57
600	1.044	0.318	23.26
700	1.145	0.349	21.19
800	1.242	0.379	19.54
824	1.265	0.386	19.19
894	1.33	0.405	18.25
960	1.39	0.424	17.46
1000	1.426	0.435	17.03

* Values typical, guaranteed within 5%

Regulatory Compliance/Certifications

Agency	Classification
ISO 9001:2008	Designed, manufactured and/or distributed under this quality management system