

**HJ4-50****HJ4-50, HELIAX® Standard Air Dielectric Coaxial Cable, corrugated copper, 1/2 in, black PE jacket****OBSOLETE**

This product was discontinued on: May 16, 2012

Construction Materials

Jacket Material	PE
Dielectric Material	PE
Flexibility	Standard
Inner Conductor Material	Copper
Jacket Color	Black
Outer Conductor Material	Corrugated copper

Dimensions

Nominal Size	1/2 in
Cable Volume	0.1 ft ³ /kft 9.3 L/km
Cable Weight	0.37 kg/m 0.25 lb/ft
Diameter Over Jacket	14.732 mm 0.580 in
Inner Conductor OD	4.0640 mm 0.1600 in
Outer Conductor OD	12.700 mm 0.500 in

Electrical Specifications

Cable Impedance	50 ohm ±1 ohm
Capacitance	22.2 pF/ft 72.8 pF/m
dc Resistance, Inner Conductor	1.476 ohms/km 0.450 ohms/kft
dc Resistance, Outer Conductor	1.312 ohms/km 0.400 ohms/kft
dc Test Voltage	2900 V
Inductance	1.870 µH/m 0.570 µH/ft
Insulation Resistance	100000 Mohms•km
Jacket Spark Test Voltage (rms)	8000 V
Operating Frequency Band	1 – 10900 MHz
Peak Power	21.0 kW
Power Attenuation	1.894
Velocity	91%

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)

General Specifications

Brand	HELIAX®
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Mechanical Specifications

Bending Moment	10.8 N-m 8.0 ft lb
Flat Plate Crush Strength	250.0 lb/in 4.5 kg/mm
Minimum Bend Radius, Multiple Bends	127.00 mm 5.00 in
Number of Bends, minimum	15
Number of Bends, typical	20
Pressurization, maximum	0 N/mm ² 30 psi
Tensile Strength	318 kg 700 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	100 °C 212 °F

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Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
0.5	0.184	0.056	21.00
1	0.26	0.079	21.00
1.5	0.319	0.097	19.50
2	0.368	0.112	16.88
10	0.829	0.253	7.50
20	1.179	0.359	5.27
30	1.449	0.442	4.29
50	1.883	0.574	3.30
88	2.521	0.768	2.47
100	2.693	0.821	2.31
108	2.803	0.854	2.22
150	3.328	1.014	1.87
174	3.597	1.096	1.73
200	3.87	1.18	1.61
300	4.798	1.462	1.30
400	5.596	1.706	1.11
450	5.962	1.817	1.04
500	6.312	1.924	0.98
512	6.393	1.949	0.97
600	6.969	2.124	0.89
700	7.582	2.311	0.82
800	8.159	2.487	0.76
824	8.293	2.528	0.75
894	8.676	2.644	0.72
960	9.026	2.751	0.69
1000	9.233	2.814	0.67
1250	10.461	3.188	0.59
1500	11.596	3.534	0.54
1700	12.453	3.795	0.50
1800	12.867	3.922	0.48
2000	13.67	4.167	0.45
2100	14.061	4.286	0.44
2200	14.445	4.403	0.43
2300	14.822	4.518	0.42
2500	15.56	4.742	0.40
2700	16.277	4.961	0.38
3000	17.319	5.279	0.36
3400	18.653	5.685	0.33
3700	19.619	5.98	0.32
4000	20.559	6.266	0.30
5000	23.538	7.174	0.26
6000	26.332	8.026	0.24
8000	31.527	9.609	0.20
8800	33.495	10.209	0.19
10000	36.353	11.08	0.17

* Values typical, guaranteed within 5%

Regulatory Compliance/Certifications

Agency	Classification
RoHS 2011/65/EU	Compliant by Exemption
China RoHS SJ/T 11364-2006	Above Maximum Concentration Value (MCV)

Product Specifications

COMMScope®

HJ4-50

ISO 9001:2008

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

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