



Heat Treated FSJ1-50A, HELIAX® Superflexible Low Density Foam Coaxial Cable, corrugated copper, 1/4 in, black PE Jacket

Product Classification

Brand	HELIAX®
Product Series	FSJ1-50A
Product Type	Coaxial wireless cable

Construction Materials

Jacket Material	PE
Outer Conductor Material	Corrugated copper
Dielectric Material	Foam PE
Flexibility	Superflexible
Inner Conductor Material	Copper-clad aluminum wire
Jacket Color	Black

Dimensions

Nominal Size	1/4 in
Cable Weight	0.05 lb/ft 0.07 kg/m
Diameter Over Dielectric	4.826 mm 0.190 in
Diameter Over Jacket	7.366 mm 0.290 in
Inner Conductor OD	1.9050 mm 0.0750 in
Outer Conductor OD	6.350 mm 0.250 in

Electrical Specifications

Cable Impedance	50 ohm \pm 1 ohm
Capacitance	24.2 pF/ft 79.4 pF/m
dc Resistance, Inner Conductor	3.000 ohms/kft 9.843 ohms/km
dc Resistance, Outer Conductor	2.000 ohms/kft 6.562 ohms/km
dc Test Voltage	1600 V
Inductance	0.200 μ H/m 0.061 μ H/ft
Insulation Resistance	100000 Mohms•km
Jacket Spark Test Voltage (rms)	5000 V
Operating Frequency Band	1 – 18000 MHz

Peak Power	6.4 kW
Velocity	82%

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)

Mechanical Specifications

Bending Moment	1.1 N-m 0.8 ft lb
Flat Plate Crush Strength	100.0 lb/in 1.8 kg/mm
Minimum Bend Radius, Multiple Bends	25.40 mm 1.00 in
Minimum Bend Radius, Single Bend	25.40 mm 1.00 in
Number of Bends, minimum	15
Number of Bends, typical	20
Tensile Strength	68 kg 150 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

Return Loss/VSWR

Frequency Band	VSWR	Return Loss (dB)
680–960 MHz	1.2	20.80
1700–2200 MHz	1.2	20.80
2200–2700 MHz	1.43	15.00

Electrical Performance

Frequency	Attenuation (dB/100 m)	Attenuation (dB/100 ft)
0.5 MHz	0.41	0.12
1 MHz	0.58	0.18
1.5 MHz	0.71	0.22
2 MHz	0.82	0.25
10 MHz	1.83	0.56
20 MHz	2.60	0.79
30 MHz	3.19	0.97
50 MHz	4.14	1.26

85 MHz	5.42	1.65
88 MHz	5.52	1.68
100 MHz	5.89	1.80
108 MHz	6.13	1.87
150 MHz	7.25	2.21
174 MHz	7.83	2.39
200 MHz	8.41	2.56
204 MHz	8.50	2.59
300 MHz	10.37	3.16
400 MHz	12.05	3.67
450 MHz	12.82	3.91
500 MHz	13.55	4.13
512 MHz	13.72	4.18
600 MHz	14.91	4.54
700 MHz	16.18	4.93
800 MHz	17.36	5.29
824 MHz	17.64	5.38
894 MHz	18.42	5.61
960 MHz	19.13	5.83
1000 MHz	19.56	5.96
1218 MHz	21.74	6.63
1250 MHz	22.04	6.72
1500 MHz	24.33	7.41
1700 MHz	26.04	7.94
1794 MHz	26.81	8.17
1800 MHz	26.86	8.19
2000 MHz	28.46	8.67
2100 MHz	29.23	8.91
2200 MHz	29.98	9.14
2300 MHz	30.73	9.37
2500 MHz	32.17	9.81
2700 MHz	33.58	10.23
3000 MHz	35.60	10.85
3400 MHz	38.18	11.64
3700 MHz	40.04	12.20
4000 MHz	41.84	12.75
5000 MHz	47.50	14.48
6000 MHz	52.75	16.08
8000 MHz	62.37	19.01
8800 MHz	65.97	20.11
10000 MHz	71.17	21.69
12000 MHz	79.39	24.20
14000 MHz	87.17	26.57
15800 MHz	93.87	28.61
16000 MHz	94.60	28.83
18000 MHz	101.75	31.01

* Values typical, guaranteed within 5%

Regulatory Compliance/Certifications

Agency

UL/ETL Certification

RoHS 2011/65/EU

ISO 9001:2015

China RoHS SJ/T 11364-2014

Classification

Compliant

Compliant

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

Below Maximum Concentration Value (MCV)

