

FSJ4-50B



FSJ4-50B, HELIAX® Superflexible Foam Coaxial Cable, corrugated copper, 1/2 in, black PE jacket (Halogen free jacketing non-fire-retardant)

Product Classification

Product Type	Coaxial wireless cable
Product Brand	HELIAX® SureFlex®
Product Series	FSJ4-50B
Ordering Note	CommScope® standard product (Global)

General Specifications

Flexibility	Superflexible
Jacket Color	Black

Dimensions

Diameter Over Dielectric	8.89 mm 0.35 in
Diameter Over Jacket	13.462 mm 0.53 in
Inner Conductor OD	3.556 mm 0.14 in
Outer Conductor OD	12.192 mm 0.48 in
Nominal Size	1/2 in

Electrical Specifications

Cable Impedance	50 ohm ±1 ohm
Capacitance	82.7 pF/m 25.207 pF/ft
dc Resistance, Inner Conductor	2.69 ohms/km 0.82 ohms/kft
dc Resistance, Outer Conductor	5.12 ohms/km 1.561 ohms/kft
dc Test Voltage	2500 V
Inductance	0.207 µH/m 0.063 µH/ft
Insulation Resistance	100000 MOhms-km

FSJ4-50B

Jacket Spark Test Voltage (rms)	5000 V
Operating Frequency Band	1 – 10200 MHz
Peak Power	22.5 kW
Velocity	81 %

VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
680–800 MHz	1.21	20.8
800–960 MHz	1.21	20.8
1700–2200 MHz	1.21	20.8
2300–2700 MHz	1.21	20.8

Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
1.0	0.327	0.1	22.5
1.5	0.401	0.122	22.5
2.0	0.463	0.141	22.5
10.0	1.044	0.318	10.14
20.0	1.485	0.453	7.12
30.0	1.828	0.557	5.79
50.0	2.377	0.724	4.45
85.0	3.13	0.954	3.38
88.0	3.187	0.971	3.32
100.0	3.406	1.038	3.11
108.0	3.546	1.081	2.98
150.0	4.214	1.285	2.51
174.0	4.558	1.389	2.32
200.0	4.908	1.496	2.16
204.0	4.96	1.512	2.13
300.0	6.095	1.858	1.74
400.0	7.121	2.17	1.49
450.0	7.592	2.314	1.39
460.0	7.684	2.342	1.38
500.0	8.042	2.451	1.32
512.0	8.148	2.483	1.3

FSJ4-50B

600.0	8.891	2.71	1.19
700.0	9.683	2.951	1.09
800.0	10.431	3.179	1.01
824.0	10.605	3.232	1
894.0	11.101	3.383	0.95
960.0	11.555	3.522	0.92
1000.0	11.824	3.604	0.89
1218.0	13.226	4.031	0.8
1250.0	13.423	4.091	0.79
1500.0	14.906	4.543	0.71
1700.0	16.027	4.885	0.66
1794.0	16.537	5.04	0.64
1800.0	16.57	5.05	0.64
2000.0	17.624	5.371	0.6
2100.0	18.137	5.528	0.58
2200.0	18.641	5.682	0.57
2300.0	19.138	5.833	0.55
2500.0	20.11	6.129	0.53
2700.0	21.056	6.418	0.5
3000.0	22.432	6.837	0.47
3400.0	24.198	7.375	0.44
3600.0	25.055	7.636	0.42
3700.0	25.478	7.765	0.42
3800.0	25.898	7.893	0.41
3900.0	26.314	8.02	0.4
4000.0	26.727	8.146	0.4
4100.0	27.136	8.271	0.39
4200.0	27.542	8.394	0.38
4300.0	27.946	8.517	0.38
4400.0	28.346	8.639	0.37
4500.0	28.744	8.761	0.37
4600.0	29.139	8.881	0.36
4700.0	29.531	9.001	0.36
4800.0	29.921	9.119	0.35
4900.0	30.308	9.238	0.35

FSJ4-50B

5000.0	30.693	9.355	0.34
6000.0	34.427	10.493	0.31
8000.0	41.403	12.619	0.26
8800.0	44.054	13.427	0.24
10000.0	47.914	14.603	0.22

Material Specifications

Dielectric Material	Foam PE
Jacket Material	PE
Inner Conductor Material	Copper-clad aluminum wire
Outer Conductor Material	Corrugated copper

Mechanical Specifications

Minimum Bend Radius, multiple Bends	31.75 mm 1.25 in
Minimum Bend Radius, single Bend	31.75 mm 1.25 in
Number of Bends, minimum	20
Number of Bends, typical	50
Tensile Strength	79 kg 174.165 lb
Bending Moment	2.7 N-m 23.897 in lb
Flat Plate Crush Strength	2 kg/mm 111.995 lb/in

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)
Attenuation, Ambient Temperature	68 °F 20 °C
Average Power, Ambient Temperature	104 °F 40 °C
Average Power, Inner Conductor Temperature	212 °F 100 °C

Packaging and Weights

Cable weight	0.21 kg/m 0.141 lb/ft
---------------------	-------------------------

Regulatory Compliance/Certifications

Agency	Classification
---------------	-----------------------

FSJ4-50B

CENELEC	EN 50575 compliant, Declaration of Performance (DoP) available
CHINA-ROHS	Above maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
ROHS	Compliant

