

FSJ4RK-50B



FSJ4-50B, HELIAX® Superflexible Foam Coaxial Cable, corrugated copper, 1/2 in, black non-halogenated, fire retardant polyolefin jacket B2ca-s1a,d0,a1

Product Classification

Brand	HELIAX® SureFlex®
Product Series	FSJ4-50B
Product Type	Coaxial wireless cable

Standards And Qualifications

EN50575 CPR Cable EuroClass	B2ca s1a d0 a1
------------------------------------	----------------------

Construction Materials

Jacket Material	Non-halogenated, fire retardant polyolefin
Outer Conductor Material	Corrugated copper
Dielectric Material	Foam PE
Flexibility	Superflexible
Inner Conductor Material	Copper-clad aluminum wire
Jacket Color	Black

Dimensions

Nominal Size	1/2 in
Cable Weight	0.16 lb/ft 0.24 kg/m
Diameter Over Dielectric	8.890 mm 0.350 in
Diameter Over Jacket	13.462 mm 0.530 in
Inner Conductor OD	3.5560 mm 0.1400 in
Outer Conductor OD	12.192 mm 0.480 in

Electrical Specifications

Cable Impedance	50 ohm \pm 1 ohm
Capacitance	25.2 pF/ft 82.7 pF/m
dc Resistance, Inner Conductor	0.820 ohms/kft 2.690 ohms/km
dc Resistance, Outer Conductor	1.560 ohms/kft 5.120 ohms/km
dc Test Voltage	2500 V

FSJ4RK-50B

Inductance	0.207 $\mu\text{H}/\text{m}$ 0.063 $\mu\text{H}/\text{ft}$
Insulation Resistance	100000 Mohms•km
Jacket Spark Test Voltage (rms)	4000 V
Operating Frequency Band	1 – 10200 MHz
Peak Power	22.5 kW
Velocity	81 %

Environmental Specifications

Installation Temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Operating Temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Storage Temperature	-40 °C to +60 °C (-40 °F to +140 °F)

General Specifications

Ordering Note	CommScope® standard product in Asia Pacific
----------------------	---

Mechanical Specifications

Bending Moment	2.7 N-m 2.0 ft lb
Fire Retardancy Test Method	NFPA 130-2010 UL 1666/CATVR/CMR
Flat Plate Crush Strength	110.0 lb/in 2.0 kg/mm
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	30
Number of Bends, typical	50
Smoke Index Test Method	IEC 61034
Tensile Strength	79 kg 175 lb
Toxicity Index Test Method	IEC 60754-1 IEC 60754-2

Note

Performance Note	Values typical, unless otherwise stated
-------------------------	---

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)
680–800 MHz	1.2	20.80

FSJ4RK-50B

800–960 MHz	1.2	20.80
1700–2200 MHz	1.2	20.80
2300–2700 MHz	1.2	20.80

Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
0.5	0.231	0.07	22.50
1	0.327	0.1	22.50
1.5	0.401	0.122	22.50
2	0.463	0.141	22.50
10	1.044	0.318	10.12
20	1.485	0.453	7.11
30	1.828	0.557	5.78
50	2.377	0.724	4.44
85	3.13	0.954	3.38
88	3.187	0.971	3.32
100	3.406	1.038	3.10
108	3.546	1.081	2.98
150	4.214	1.285	2.51
174	4.558	1.389	2.32
200	4.908	1.496	2.15
204	4.96	1.512	2.13
300	6.095	1.858	1.73
400	7.121	2.17	1.48
450	7.592	2.314	1.39
460	7.684	2.342	1.37
460	7.684	2.342	1.37
500	8.042	2.451	1.31
512	8.148	2.483	1.30
600	8.891	2.71	1.19
700	9.683	2.951	1.09
800	10.431	3.179	1.01
824	10.605	3.232	1.00
894	11.101	3.383	0.95
960	11.555	3.522	0.91
1000	11.824	3.604	0.89
1218	13.226	4.031	0.80
1250	13.423	4.091	0.79
1500	14.906	4.543	0.71
1700	16.027	4.885	0.66
1794	16.537	5.04	0.64
1800	16.57	5.05	0.64
2000	17.624	5.371	0.60
2100	18.137	5.528	0.58
2200	18.641	5.682	0.57
2300	19.138	5.833	0.55
2500	20.11	6.129	0.53
2700	21.056	6.418	0.50
3000	22.432	6.837	0.47
3400	24.198	7.375	0.44
3600	25.055	7.636	0.42

FSJ4RK-50B

3700	25.478	7.765	0.41
3800	25.898	7.893	0.41
3900	26.314	8.02	0.40
4000	26.727	8.146	0.40
4100	27.136	8.271	0.39
4200	27.542	8.394	0.38
4300	27.946	8.517	0.38
4400	28.346	8.639	0.37
4500	28.744	8.761	0.37
4600	29.139	8.881	0.36
4700	29.531	9.001	0.36
4800	29.921	9.119	0.35
4900	30.308	9.238	0.35
5000	30.693	9.355	0.34
6000	34.427	10.493	0.31
8000	41.403	12.619	0.26
8800	44.054	13.427	0.24
10000	47.914	14.604	0.22

* 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
CENELEC

Classification

CATVR/CMR
Compliant
Designed, manufactured and/or distributed under this quality management system
Below Maximum Concentration Value (MCV)
EN 50575 compliant, Declaration of Performance (DoP) available

