

# 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

<b>Product Type</b>	Coaxial wireless cable
<b>Product Brand</b>	HELIAX®   SureFlex®
<b>Product Series</b>	FSJ4-50B
<b>Ordering Note</b>	ANDREW® standard product (Global)

## General Specifications

<b>Product Number</b>	520093902/00   SZ520093902/00
<b>Flexibility</b>	Superflexible
<b>Jacket Color</b>	Black
<b>Performance Note</b>	Attenuation values typical, guaranteed within 5%

## Dimensions

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

## Electrical Specifications

<b>Cable Impedance</b>	50 ohm $\pm$ 1 ohm
<b>Capacitance</b>	82.7 pF/m   25.207 pF/ft
<b>dc Resistance, Inner Conductor</b>	2.69 ohms/km   0.82 ohms/kft
<b>dc Resistance, Outer Conductor</b>	5.12 ohms/km   1.561 ohms/kft
<b>dc Test Voltage</b>	2500 V
<b>Inductance</b>	0.207 $\mu$ H/m   0.063 $\mu$ H/ft
<b>Insulation Resistance</b>	100000 MOhms-km
<b>Jacket Spark Test Voltage (rms)</b>	5000 V

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<b>Operating Frequency Band</b>	1 – 10200 MHz
<b>Peak Power</b>	22.5 kW
<b>Velocity</b>	81 %

## VSWR/Return Loss

<b>Frequency Band</b>	<b>VSWR</b>	<b>Return Loss (dB)</b>
<b>680–800 MHz</b>	1.201	20.79
<b>800–960 MHz</b>	1.201	20.79
<b>1700–2200 MHz</b>	1.201	20.79
<b>2300–2700 MHz</b>	1.201	20.79

## Attenuation

<b>Frequency (MHz)</b>	<b>Attenuation (dB/100 m)</b>	<b>Attenuation (dB/100 ft)</b>	<b>Average Power (kW)</b>
<b>1.0</b>	0.327	0.1	22.5
<b>1.5</b>	0.401	0.122	22.5
<b>2.0</b>	0.463	0.141	22.5
<b>10.0</b>	1.044	0.318	10.14
<b>20.0</b>	1.485	0.453	7.12
<b>30.0</b>	1.828	0.557	5.79
<b>50.0</b>	2.377	0.724	4.45
<b>85.0</b>	3.13	0.954	3.38
<b>88.0</b>	3.187	0.971	3.32
<b>100.0</b>	3.406	1.038	3.11
<b>108.0</b>	3.546	1.081	2.98
<b>150.0</b>	4.214	1.285	2.51
<b>174.0</b>	4.558	1.389	2.32
<b>200.0</b>	4.908	1.496	2.16
<b>204.0</b>	4.96	1.512	2.13
<b>300.0</b>	6.095	1.858	1.74
<b>400.0</b>	7.121	2.17	1.49
<b>450.0</b>	7.592	2.314	1.39
<b>460.0</b>	7.684	2.342	1.38
<b>500.0</b>	8.042	2.451	1.32
<b>512.0</b>	8.148	2.483	1.3
<b>600.0</b>	8.891	2.71	1.19

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<b>700.0</b>	9.683	2.951	1.09
<b>800.0</b>	10.431	3.179	1.01
<b>824.0</b>	10.605	3.232	1
<b>894.0</b>	11.101	3.383	0.95
<b>960.0</b>	11.555	3.522	0.92
<b>1000.0</b>	11.824	3.604	0.89
<b>1218.0</b>	13.226	4.031	0.8
<b>1250.0</b>	13.423	4.091	0.79
<b>1500.0</b>	14.906	4.543	0.71
<b>1700.0</b>	16.027	4.885	0.66
<b>1794.0</b>	16.537	5.04	0.64
<b>1800.0</b>	16.57	5.05	0.64
<b>2000.0</b>	17.624	5.371	0.6
<b>2100.0</b>	18.137	5.528	0.58
<b>2200.0</b>	18.641	5.682	0.57
<b>2300.0</b>	19.138	5.833	0.55
<b>2500.0</b>	20.11	6.129	0.53
<b>2700.0</b>	21.056	6.418	0.5
<b>3000.0</b>	22.432	6.837	0.47
<b>3400.0</b>	24.198	7.375	0.44
<b>3600.0</b>	25.055	7.636	0.42
<b>3700.0</b>	25.478	7.765	0.42
<b>3800.0</b>	25.898	7.893	0.41
<b>3900.0</b>	26.314	8.02	0.4
<b>4000.0</b>	26.727	8.146	0.4
<b>4100.0</b>	27.136	8.271	0.39
<b>4200.0</b>	27.542	8.394	0.38
<b>4300.0</b>	27.946	8.517	0.38
<b>4400.0</b>	28.346	8.639	0.37
<b>4500.0</b>	28.744	8.761	0.37
<b>4600.0</b>	29.139	8.881	0.36
<b>4700.0</b>	29.531	9.001	0.36
<b>4800.0</b>	29.921	9.119	0.35
<b>4900.0</b>	30.308	9.238	0.35
<b>5000.0</b>	30.693	9.355	0.34

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<b>6000.0</b>	34.427	10.493	0.31
<b>8000.0</b>	41.403	12.619	0.26
<b>8800.0</b>	44.054	13.427	0.24
<b>10000.0</b>	47.914	14.603	0.22

## Material Specifications

<b>Dielectric Material</b>	Foam PE
<b>Jacket Material</b>	PE
<b>Inner Conductor Material</b>	Copper-clad aluminum wire
<b>Outer Conductor Material</b>	Corrugated copper

## Mechanical Specifications

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

## Environmental Specifications

<b>Installation temperature</b>	-40 °C to +60 °C (-40 °F to +140 °F)
<b>Operating Temperature</b>	-55 °C to +85 °C (-67 °F to +185 °F)
<b>Storage Temperature</b>	-70 °C to +85 °C (-94 °F to +185 °F)
<b>Attenuation, Ambient Temperature</b>	68 °F   20 °C
<b>Average Power, Ambient Temperature</b>	104 °F   40 °C
<b>Average Power, Inner Conductor Temperature</b>	212 °F   100 °C

## Packaging and Weights

<b>Cable weight</b>	0.21 kg/m   0.141 lb/ft
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## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
CENELEC	EN 50575 compliant, Declaration of Performance (DoP) available
CHINA-ROHS	Below maximum concentration value

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ISO 9001:2015

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

REACH-SVHC

Compliant as per SVHC revision on [www.andrew.com/ProductCompliance](http://www.andrew.com/ProductCompliance)

ROHS

Compliant

UK-ROHS

Compliant

