

# F2A-PNMNM-2

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FSJ2-50 SureFlex® Jumper with interface types N Male and N Male,  
0.61 m



## Product Classification

<b>Product Type</b>	SureFlex® standard
<b>Product Brand</b>	HELIAX®   SureFlex®
<b>Product Series</b>	FSJ2-50

## General Specifications

<b>Body Style, Connector A</b>	Straight
<b>Body Style, Connector B</b>	Straight
<b>Interface, Connector A</b>	N Male
<b>Interface, Connector B</b>	N Male
<b>Specification Sheet Revision Level</b>	A

## Dimensions

<b>Length</b>	0.61 m   2.001 ft
<b>Nominal Size</b>	3/8 in

## VSWR/Return Loss

<b>Frequency Band</b>	<b>VSWR</b>	<b>Return Loss (dB)</b>
<b>700–3000 MHz</b>	1.222	20.01

## Jumper Assembly Sample Label

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## Environmental Specifications

**Immersion Test Method** Meets IEC 60529:2001, IP68 in mated condition

## Regulatory Compliance/Certifications

Agency	Classification
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system

## Included Products

- 35422-42 – Heat Treated FSJ2-50, HELIAX® Superflexible Foam Coaxial Cable, corrugated copper, 3/8 in, black PE jacket
- FSJ2-50 – FSJ2-50, HELIAX® Superflexible Foam Coaxial Cable, corrugated copper, 3/8 in, black PE jacket

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Heat Treated FSJ2-50, HELIAX® Superflexible Foam Coaxial Cable, corrugated copper, 3/8 in, black PE jacket

## Product Classification

<b>Product Type</b>	Coaxial wireless cable
<b>Product Brand</b>	HELIAX®   SureFlex®
<b>Product Series</b>	FSJ2-50

## General Specifications

<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>	7.112 mm   0.28 in
<b>Diameter Over Jacket</b>	10.541 mm   0.415 in
<b>Inner Conductor OD</b>	2.794 mm   0.11 in
<b>Outer Conductor OD</b>	9.652 mm   0.38 in
<b>Nominal Size</b>	3/8 in

## Electrical Specifications

<b>Cable Impedance</b>	50 ohm ±1 ohm
<b>Capacitance</b>	79.7 pF/m   24.293 pF/ft
<b>dc Resistance, Inner Conductor</b>	4.232 ohms/km   1.29 ohms/kft
<b>dc Resistance, Outer Conductor</b>	4.987 ohms/km   1.52 ohms/kft
<b>dc Test Voltage</b>	2300 V
<b>Inductance</b>	0.2 µH/m   0.061 µH/ft
<b>Insulation Resistance</b>	100000 MOhms-km

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<b>Jacket Spark Test Voltage (rms)</b>	4000 V
<b>Operating Frequency Band</b>	1 – 13400 MHz
<b>Peak Power</b>	13.2 kW
<b>Velocity</b>	83 %

## Attenuation

<b>Frequency (MHz)</b>	<b>Attenuation (dB/100 m)</b>	<b>Attenuation (dB/100 ft)</b>	<b>Average Power (kW)</b>
1.0	0.383	0.117	13.2
1.5	0.469	0.143	13.2
2.0	0.542	0.165	13.2
10.0	1.219	0.372	6.97
20.0	1.732	0.528	4.91
30.0	2.128	0.649	3.99
50.0	2.762	0.842	3.08
85.0	3.626	1.105	2.34
88.0	3.691	1.125	2.3
100.0	3.943	1.202	2.16
108.0	4.103	1.25	2.07
150.0	4.864	1.482	1.75
174.0	5.254	1.601	1.62
200.0	5.65	1.722	1.5
204.0	5.709	1.74	1.49
300.0	6.99	2.13	1.22
400.0	8.139	2.481	1.04
450.0	8.665	2.641	0.98
460.0	8.767	2.672	0.97
500.0	9.166	2.794	0.93
512.0	9.283	2.829	0.92
600.0	10.107	3.081	0.84
700.0	10.983	3.347	0.77
800.0	11.807	3.599	0.72
824.0	11.998	3.657	0.71
894.0	12.542	3.823	0.68
960.0	13.04	3.974	0.65
1000.0	13.334	4.064	0.64

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<b>1218.0</b>	14.861	4.529	0.57
<b>1250.0</b>	15.075	4.595	0.56
<b>1500.0</b>	16.68	5.084	0.51
<b>1700.0</b>	17.887	5.452	0.48
<b>1794.0</b>	18.436	5.619	0.46
<b>1800.0</b>	18.47	5.629	0.46
<b>2000.0</b>	19.599	5.974	0.43
<b>2100.0</b>	20.147	6.141	0.42
<b>2200.0</b>	20.685	6.305	0.41
<b>2300.0</b>	21.214	6.466	0.4
<b>2500.0</b>	22.247	6.781	0.38
<b>2700.0</b>	23.249	7.086	0.37
<b>3000.0</b>	24.701	7.529	0.34
<b>3400.0</b>	26.558	8.094	0.32
<b>3600.0</b>	27.456	8.368	0.31
<b>3700.0</b>	27.899	8.503	0.3
<b>3800.0</b>	28.337	8.637	0.3
<b>3900.0</b>	28.771	8.769	0.3
<b>4000.0</b>	29.201	8.9	0.29
<b>4100.0</b>	29.628	9.03	0.29
<b>4200.0</b>	30.051	9.159	0.28
<b>4300.0</b>	30.47	9.287	0.28
<b>4400.0</b>	30.886	9.414	0.28
<b>4500.0</b>	31.298	9.539	0.27
<b>4600.0</b>	31.708	9.664	0.27
<b>4700.0</b>	32.114	9.788	0.26
<b>4800.0</b>	32.518	9.911	0.26
<b>4900.0</b>	32.919	10.033	0.26
<b>5000.0</b>	33.316	10.154	0.26
<b>6000.0</b>	37.158	11.325	0.23
<b>8000.0</b>	44.264	13.491	0.19
<b>8800.0</b>	46.943	14.308	0.18
<b>10000.0</b>	50.826	15.491	0.17
<b>12000.0</b>	57.001	17.373	0.15

## Material Specifications

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<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>	25.4 mm   1 in
<b>Minimum Bend Radius, single Bend</b>	25.4 mm   1 in
<b>Number of Bends, minimum</b>	20
<b>Number of Bends, typical</b>	50
<b>Tensile Strength</b>	95 kg   209.439 lb
<b>Bending Moment</b>	2.3 N-m   20.357 in lb
<b>Flat Plate Crush Strength</b>	1.8 kg/mm   100.795 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>	0.12 kg/m   0.081 lb/ft
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## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system

# FSJ2-50

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FSJ2-50, HELIAX® Superflexible Foam Coaxial Cable, corrugated copper, 3/8 in, black PE jacket

## Product Classification

<b>Product Type</b>	Coaxial wireless cable
<b>Product Brand</b>	HELIAX®   SureFlex®
<b>Product Series</b>	FSJ2-50

## General Specifications

<b>Product Number</b>	887019902/00   SZ887019902/00
<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>	7.112 mm   0.28 in
<b>Diameter Over Jacket</b>	10.541 mm   0.415 in
<b>Inner Conductor OD</b>	2.794 mm   0.11 in
<b>Outer Conductor OD</b>	9.652 mm   0.38 in
<b>Nominal Size</b>	3/8 in

## Electrical Specifications

<b>Cable Impedance</b>	50 ohm $\pm$ 1 ohm
<b>Capacitance</b>	79.7 pF/m   24.293 pF/ft
<b>dc Resistance, Inner Conductor</b>	4.232 ohms/km   1.29 ohms/kft
<b>dc Resistance, Outer Conductor</b>	4.987 ohms/km   1.52 ohms/kft
<b>dc Test Voltage</b>	2300 V
<b>Inductance</b>	0.2 $\mu$ H/m   0.061 $\mu$ H/ft

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<b>Insulation Resistance</b>	100000 MOhms-km
<b>Jacket Spark Test Voltage (rms)</b>	4000 V
<b>Operating Frequency Band</b>	1 – 13400 MHz
<b>Peak Power</b>	13.2 kW
<b>Velocity</b>	83 %

## VSWR/Return Loss

<b>Frequency Band</b>	<b>VSWR</b>	<b>Return Loss (dB)</b>
<b>2.5–2.7 GHz</b>	1.106	25.96
<b>680–800 MHz</b>	1.106	25.96
<b>800–960 MHz</b>	1.106	25.96
<b>1700–2200 MHz</b>	1.101	26.36

## 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>	0.383	0.117	13.2
<b>1.5</b>	0.469	0.143	13.2
<b>2.0</b>	0.542	0.165	13.2
<b>10.0</b>	1.219	0.372	6.97
<b>20.0</b>	1.732	0.528	4.91
<b>30.0</b>	2.128	0.649	3.99
<b>50.0</b>	2.762	0.842	3.08
<b>85.0</b>	3.626	1.105	2.34
<b>88.0</b>	3.691	1.125	2.3
<b>100.0</b>	3.943	1.202	2.16
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<b>174.0</b>	5.254	1.601	1.62
<b>200.0</b>	5.65	1.722	1.5
<b>204.0</b>	5.709	1.74	1.49
<b>300.0</b>	6.99	2.13	1.22
<b>400.0</b>	8.139	2.481	1.04
<b>450.0</b>	8.665	2.641	0.98
<b>460.0</b>	8.767	2.672	0.97
<b>500.0</b>	9.166	2.794	0.93



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<b>512.0</b>	9.283	2.829	0.92
<b>600.0</b>	10.107	3.081	0.84
<b>700.0</b>	10.983	3.347	0.77
<b>800.0</b>	11.807	3.599	0.72
<b>824.0</b>	11.998	3.657	0.71
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<b>Bending Moment</b>	2.3 N-m   20.357 in lb
<b>Flat Plate Crush Strength</b>	1.8 kg/mm   100.795 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>	0.12 kg/m   0.081 lb/ft
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## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
CHINA-ROHS	Below maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
ROHS	Compliant
UK-ROHS	Compliant

