## F2RNA-PNMNM-2M

FSJ2RK-50 SureFlex® Jumper with interface types N Male and N Male,



**■** 2 m

#### **Product Classification**

**Product Type** Wireless transmission cable assembly

**Product Brand** HELIAX® | SureFlex®

**Product Series** FSJ2-50

General Specifications

**Body Style, Connector A** Straight Straight **Body Style, Connector B** N Male Interface, Connector A N Male Interface, Connector B Α

**Specification Sheet Revision Level** 

**Dimensions** 

Length 2 m | 6.562 ft

**Nominal Size** 3/8 in

VSWR/Return Loss

**Frequency Band VSWR** Return Loss (dB)

700-3000 MHz 1.222 20.01

Jumper Assembly Sample Label



### F2RNA-PNMNM-2M



### **Environmental Specifications**

EN50575 CPR Cable EuroClass Fire PerformanceB2caEN50575 CPR Cable EuroClass Smoke Ratings1aEN50575 CPR Cable EuroClass Droplets Ratingd0EN50575 CPR Cable EuroClass Acidity Ratinga1

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

### Regulatory Compliance/Certifications

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

#### Included Products

35422-48 – Heat Treated FSJ2RK-50, HELIAX® Superflexible Foam Coaxial Cable, corrugated copper, 3/8 in, black non-halogenated, fire retardant polyolefin jacket

FSJ2RK-50 - FSJ2-50, HELIAX® Superflexible Foam Coaxial Cable, corrugated copper, 3/8 in, black non-

halogenated, fire retardant polyolefin jacket B2ca s1a d0 a1 Compliant



Heat Treated FSJ2RK-50, HELIAX® Superflexible Foam Coaxial Cable, corrugated copper, 3/8 in, black non-halogenated, fire retardant polyolefin jacket

#### **Product Classification**

 Product Type
 Coaxial wireless cable

 Product Brand
 HELIAX® | SureFlex®

**Product Series** FSJ2-50

General Specifications

**Flexibility** Superflexible

Jacket Color Black

**Performance Note**Attenuation values typical, guaranteed within 5%

**Dimensions** 

 Diameter Over Dielectric
 7.112 mm | 0.28 in

 Diameter Over Jacket
 10.922 mm | 0.43 in

 Inner Conductor OD
 2.794 mm | 0.11 in

 Outer Conductor OD
 9.652 mm | 0.38 in

Nominal Size 3/8 in

**Electrical Specifications** 

**Cable Impedance** 50 ohm ±1 ohm

**Capacitance** 80 pF/m | 24.384 pF/ft

dc Resistance, Inner Conductor4.232 ohms/km | 1.29 ohms/kftdc Resistance, Outer Conductor4.987 ohms/km | 1.52 ohms/kft

dc Test Voltage 2300 V

**Inductance**  $0.2 \,\mu\text{H/m} \mid 0.061 \,\mu\text{H/ft}$ 

**Insulation Resistance** 100000 MOhms-km

Jacket Spark Test Voltage (rms) 4000 V

**Operating Frequency Band** 1 – 13400 MHz

 Peak Power
 13.2 kW

 Velocity
 83 %

### VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
680-960 MHz	1.201	20.79
1700-2200 MHz	1.201	20.79
2200-2700 MHz	1.433	14.99

#### Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
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
1218.0	14.861	4.529	0.57
1250.0	15.075	4.595	0.56
1500.0	16.68	5.084	0.51
1700.0	17.887	5.452	0.48
1794.0	18.436	5.619	0.46
1800.0	18.47	5.629	0.46
2000.0	19.599	5.974	0.43
2100.0	20.147	6.141	0.42
2200.0	20.685	6.305	0.41
2300.0	21.214	6.466	0.4
2500.0	22.247	6.781	0.38
2700.0	23.249	7.086	0.37
3000.0	24.701	7.529	0.34
3400.0	26.558	8.094	0.32
3600.0	27.456	8.368	0.31
3700.0	27.899	8.503	0.3
3800.0	28.337	8.637	0.3
3900.0	28.771	8.769	0.3
4000.0	29.201	8.9	0.29
4100.0	29.628	9.03	0.29
4200.0	30.051	9.159	0.28
4300.0	30.47	9.287	0.28
4400.0	30.886	9.414	0.28
4500.0	31.298	9.539	0.27
4600.0	31.708	9.664	0.27
4700.0	32.114	9.788	0.26
4800.0	32.518	9.911	0.26
4900.0	32.919	10.033	0.26
5000.0	33.316	10.154	0.26

6000.0	37.158	11.325	0.23
8000.0	44.264	13.491	0.19
8800.0	46.943	14.308	0.18
10000.0	50.826	15.491	0.17
12000.0	57.001	17.373	0.15

### Material Specifications

**Dielectric Material** Foam PE

Jacket Material Non-halogenated, fire retardant polyolefin

Inner Conductor Material Copper-clad aluminum wire

Outer Conductor Material Corrugated copper

Mechanical Specifications

Minimum Bend Radius, multiple Bends25.4 mm | 1 inMinimum Bend Radius, single Bend25.4 mm | 1 in

Number of Bends, minimum 30 Number of Bends, typical 50

 Tensile Strength
 95 kg | 209.439 lb

 Bending Moment
 2.3 N-m | 20.357 in lb

 Flat Plate Crush Strength
 1.8 kg/mm | 100.795 lb/in

### **Environmental Specifications**

Installation temperature  $-40 \,^{\circ}\text{C}$  to  $+60 \,^{\circ}\text{C}$  ( $-40 \,^{\circ}\text{F}$  to  $+140 \,^{\circ}\text{F}$ )

Operating Temperature  $-40 \,^{\circ}\text{C}$  to  $+60 \,^{\circ}\text{C}$  ( $-40 \,^{\circ}\text{F}$  to  $+140 \,^{\circ}\text{F}$ )

Storage Temperature  $-40 \,^{\circ}\text{C}$  to  $+60 \,^{\circ}\text{C}$  ( $-40 \,^{\circ}\text{F}$  to  $+140 \,^{\circ}\text{F}$ )

Attenuation, Ambient Temperature  $68 \,^{\circ}\text{F} \mid 20 \,^{\circ}\text{C}$ Average Power, Ambient Temperature  $104 \,^{\circ}\text{F} \mid 40 \,^{\circ}\text{C}$ Average Power, Inner Conductor Temperature  $212 \,^{\circ}\text{F} \mid 100 \,^{\circ}\text{C}$ 

Fire Retardancy Test Method NFPA 130-2010 | UL 1666/CATVR

Smoke Index Test Method IEC 61034

**Toxicity Index Test Method**IEC 60754-1 | IEC 60754-2

Packaging and Weights

**Cable weight** 0.13 kg/m | 0.087 lb/ft

### Regulatory Compliance/Certifications

Agency Classification

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





FSJ2-50, HELIAX® Superflexible Foam Coaxial Cable, corrugated copper, 3/8 in, black non-halogenated, fire retardant polyolefin jacket B2ca s1a d0 a1 Compliant

#### **Product Classification**

Product Type Coaxial wireless cable

Product Brand HELIAX® | SureFlex®

Product Series FSJ2-50

General Specifications

**Product Number** 520102002/00 | SZ520102002/00

**Flexibility** Superflexible

Jacket Color Black

**Performance Note**Attenuation values typical, guaranteed within 5%

**Dimensions** 

 Diameter Over Dielectric
 7.112 mm | 0.28 in

 Diameter Over Jacket
 10.922 mm | 0.43 in

 Inner Conductor OD
 2.794 mm | 0.11 in

 Outer Conductor OD
 9.652 mm | 0.38 in

Nominal Size 3/8 in

**Electrical Specifications** 

Cable Impedance50 ohm ±1 ohm

**Capacitance** 80 pF/m | 24.384 pF/ft

dc Resistance, Inner Conductor4.232 ohms/km | 1.29 ohms/kftdc Resistance, Outer Conductor4.987 ohms/km | 1.52 ohms/kft

dc Test Voltage 2300 V

Inductance  $0.2 \mu H/m \mid 0.061 \mu H/ft$ 

**Insulation Resistance** 100000 MOhms-km

Jacket Spark Test Voltage (rms) 4000 V

Operating Frequency Band 1 – 13400 MHz

Peak Power13.2 kWVelocity83 %

#### VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
680-960 MHz	1.201	20.79
1700-2200 MHz	1.201	20.79
2200-2700 MHz	1.433	14.99

### Attenuation

1.00.3830.11713.21.50.4690.14313.22.00.5420.16513.210.01.2190.3726.9720.01.7320.5284.9130.02.1280.6493.9950.02.7620.8423.0885.03.6261.1052.34
2.00.5420.16513.210.01.2190.3726.9720.01.7320.5284.9130.02.1280.6493.9950.02.7620.8423.08
10.01.2190.3726.9720.01.7320.5284.9130.02.1280.6493.9950.02.7620.8423.08
20.01.7320.5284.9130.02.1280.6493.9950.02.7620.8423.08
30.02.1280.6493.9950.02.7620.8423.08
<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>400.0</b> 8.139 2.481 1.04
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### Material Specifications

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Number of Bends, minimum30Number of Bends, typical50

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 Bending Moment
 2.3 N-m | 20.357 in lb

Flat Plate Crush Strength 1.8 kg/mm | 100.795 lb/in

### **Environmental Specifications**

Installation temperature  $-40 \, ^{\circ}\text{C to } +60 \, ^{\circ}\text{C (-40 \, ^{\circ}\text{F to } +140 \, ^{\circ}\text{F})}$  Operating Temperature  $-40 \, ^{\circ}\text{C to } +60 \, ^{\circ}\text{C (-40 \, ^{\circ}\text{F to } +140 \, ^{\circ}\text{F})}$  Storage Temperature  $-40 \, ^{\circ}\text{C to } +60 \, ^{\circ}\text{C (-40 \, ^{\circ}\text{F to } +140 \, ^{\circ}\text{F})}$ 

Attenuation, Ambient Temperature68 °F | 20 °CAverage Power, Ambient Temperature104 °F | 40 °CAverage Power, Inner Conductor Temperature212 °F | 100 °C

EN50575 CPR Cable EuroClass Fire PerformanceB2caEN50575 CPR Cable EuroClass Smoke Ratings1aEN50575 CPR Cable EuroClass Droplets Ratingd0EN50575 CPR Cable EuroClass Acidity Ratinga1



Fire Retardancy Test Method | IEC 60332-1-2 | IEC 60332-3-24 | NFPA 130-2010 | UL 1666/CATVR

/CMR | UL 1685

Smoke Index Test Method IEC 61034

**Toxicity Index Test Method** IEC 60754-1 | IEC 60754-2

Packaging and Weights

**Cable weight** 0.13 kg/m | 0.087 lb/ft

### Regulatory Compliance/Certifications

#### Agency Classification

CENELEC EN 50575 compliant, Declaration of Performance (DoP) available

CHINA-ROHS Below maximum concentration value

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

REACH-SVHC Compliant as per SVHC revision on www.commscope.com/ProductCompliance

ROHS Compliant UK-ROHS Compliant

