

# F4CR-HPNMNF-M5



HELIAX® 1/2" Superflexible Fire retardant SureFlex® Jumper with interface types N Male and N Female, 0.5 m, with black non-halogenated fire retardant polyolefin jacket

## Product Classification

<b>Product Type</b>	SureFlex® HP, HELIAX® performance
<b>Product Brand</b>	HELIAX®   SureFlex®
<b>Product Series</b>	RSJ4-50

## General Specifications

<b>Attachment, Connector A</b>	Factory attached
<b>Attachment, Connector B</b>	Factory attached
<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 Female
<b>Specification Sheet Revision Level</b>	A

## Dimensions

<b>Length</b>	0.5 m   1.64 ft
<b>Nominal Size</b>	1/2 in

## Electrical Specifications

<b>3rd Order IMD Static Test Method</b>	Two +43 dBm carriers
<b>3rd Order IMD, typical</b>	-112 dBm
<b>DTF, Connector A</b>	-34 dB
<b>DTF, Connector B</b>	-34 dB

## VSWR/Return Loss

Frequency Band	VSWR, typical	Return Loss, typical (dB)
698–960 MHz	1.065	30

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1700–2200 MHz	1.065	30
2200–2700 MHz	1.106	26

## Jumper Assembly Sample Label



## Environmental Specifications

<b>EN50575 CPR Cable EuroClass Fire Performance</b>	B2ca
<b>EN50575 CPR Cable EuroClass Smoke Rating</b>	s1a
<b>EN50575 CPR Cable EuroClass Droplets Rating</b>	d1
<b>EN50575 CPR Cable EuroClass Acidity Rating</b>	a1
<b>Immersion Test Method</b>	Meets IEC 60529:2001, IP68 in mated condition

## Regulatory Compliance/Certifications

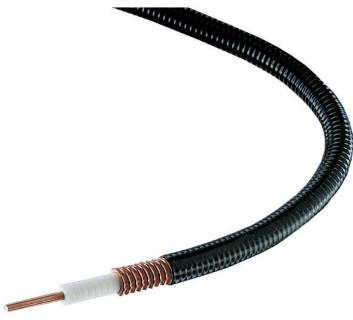
Agency	Classification
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system

## Included Products

RSJ4RK-50LF	–	RSJ4-50, HELIAX® Superflexible Foam Coaxial Cable, corrugated copper, 1/2 in, black non-halogenated, fire retardant polyolefin jacket B2ca-s1a,d1,a1
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RSJ4-50, HELIAX® Superflexible Foam Coaxial Cable, corrugated copper, 1/2 in, black non-halogenated, fire retardant polyolefin jacket  
B2ca-s1a,d1,a1

## Product Classification

<b>Product Type</b>	Coaxial wireless cable
<b>Product Brand</b>	HELIAX®   SureFlex®
<b>Product Series</b>	RSJ4-50

## 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>	9.423 mm   0.371 in
<b>Diameter Over Jacket</b>	13.411 mm   0.528 in
<b>Inner Conductor OD</b>	3.594 mm   0.141 in
<b>Outer Conductor OD</b>	11.989 mm   0.472 in
<b>Nominal Size</b>	1/2 in

## Electrical Specifications

<b>Cable Impedance</b>	50 ohm ±1 ohm
<b>Capacitance</b>	83.9 pF/m   25.573 pF/ft
<b>dc Resistance, Inner Conductor</b>	2.76 ohms/km   0.841 ohms/kft
<b>dc Resistance, Outer Conductor</b>	5.73 ohms/km   1.747 ohms/kft
<b>dc Test Voltage</b>	2500 V
<b>Inductance</b>	0.213 µH/m   0.065 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 – 10200 MHz
<b>Peak Power</b>	15.6 kW
<b>Velocity</b>	79 %

## 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	15.6
<b>1.5</b>	0.401	0.122	15.6
<b>2.0</b>	0.463	0.141	15.6
<b>10.0</b>	1.044	0.318	10.12
<b>20.0</b>	1.485	0.453	7.11
<b>30.0</b>	1.828	0.557	5.78
<b>50.0</b>	2.377	0.724	4.44
<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	3.1
<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	2.15
<b>204.0</b>	4.96	1.512	2.13
<b>300.0</b>	6.095	1.858	1.73
<b>400.0</b>	7.121	2.17	1.48
<b>450.0</b>	7.592	2.314	1.39
<b>460.0</b>	7.684	2.342	1.37
<b>500.0</b>	8.042	2.451	1.31
<b>512.0</b>	8.148	2.483	1.3

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<b>600.0</b>	8.891	2.71	1.19
<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	0.91
<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	0.41
<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

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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

<b>Dielectric Material</b>	Foam PE
<b>Jacket Material</b>	Non-halogenated, fire retardant polyolefin
<b>Inner Conductor Material</b>	Copper-plating 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>	12
<b>Number of Bends, typical</b>	15
<b>Tensile Strength</b>	79 kg   174.165 lb
<b>Bending Moment</b>	2.6 N-m   23.012 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>	-40 °C to +60 °C (-40 °F to +140 °F)
<b>Storage Temperature</b>	-40 °C to +60 °C (-40 °F to +140 °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
<b>EN50575 CPR Cable EuroClass Fire Performance</b>	B2ca
<b>EN50575 CPR Cable EuroClass Smoke Rating</b>	s1a
<b>EN50575 CPR Cable EuroClass Droplets Rating</b>	d1
<b>EN50575 CPR Cable EuroClass Acidity Rating</b>	a1
<b>Fire Retardancy Test Method</b>	IEC 60332-1-2   NFPA 130-2010   UL 1666/CATVR/CMR

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**Smoke Index Test Method**

IEC 61034

**Toxicity Index Test Method**

IEC 60754-2

Packaging and Weights

**Cable weight**

0.15 kg/m | 0.101 lb/ft