

# F4R-HPNMDM-1M



HELIAX® 1/2" Superflexible Fire retardant SureFlex® Jumper with interface types N Male and 7-16 DIN Male, 1 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>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>	7-16 DIN Male
<b>Specification Sheet Revision Level</b>	A

## Dimensions

<b>Length</b>	1 m   3.281 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	30.04
1700–2200 MHz	1.065	30.04
2200–2700 MHz	1.106	25.96

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## 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

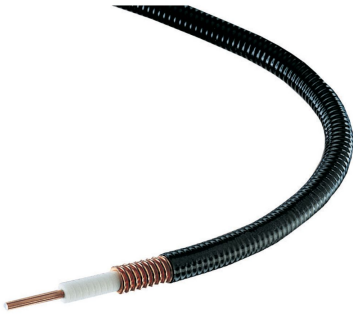
## Regulatory Compliance/Certifications

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

## Included Products

FSJ4RK-50B	– FSJ4RK-50B, HELIAX <sup>®</sup> Superflexible Foam Coaxial Cable, corrugated copper, 1/2 in, black non-halogenated, fire retardant polyolefin jacket B2ca-s1a-d1-a1 (CPR testing is conducted annually please reference the website for latest classification)
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# FSJ4RK-50B



FSJ4RK-50B, HELIAX® Superflexible Foam Coaxial Cable, corrugated copper, 1/2 in, black non-halogenated, fire retardant polyolefin jacket B2ca-s1a-d1-a1 (CPR testing is conducted annually please reference the website for latest classification)

## 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>	CommScope® standard product in Asia Pacific

## General Specifications

<b>Product Number</b>	520094502/00   SZ520094502/00
<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 ±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

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<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>	4000 V
<b>Operating Frequency Band</b>	1 – 10200 MHz
<b>Peak Power</b>	22.5 kW
<b>Velocity</b>	81 %

## VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
680–800 MHz	1.201	20.8
800–960 MHz	1.201	20.8
1700–2200 MHz	1.201	20.8
2300–2700 MHz	1.201	20.8

## Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
1.0	0.327	0.1	22.5
1.5	0.401	0.122	22.5
2.0	0.463	0.141	22.5
10.0	1.044	0.318	10.12
20.0	1.485	0.453	7.11
30.0	1.828	0.557	5.78
50.0	2.377	0.724	4.44
85.0	3.13	0.954	3.38
88.0	3.187	0.971	3.32
100.0	3.406	1.038	3.1
108.0	3.546	1.081	2.98
150.0	4.214	1.285	2.51
174.0	4.558	1.389	2.32
200.0	4.908	1.496	2.15
204.0	4.96	1.512	2.13
300.0	6.095	1.858	1.73
400.0	7.121	2.17	1.48
450.0	7.592	2.314	1.39
460.0	7.684	2.342	1.37

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<b>500.0</b>	8.042	2.451	1.31
<b>512.0</b>	8.148	2.483	1.3
<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

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4800.0	29.921	9.119	0.35
4900.0	30.308	9.238	0.35
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-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>	30
<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>	-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

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<b>Fire Retardancy Test Method</b>	IEC 60332-1-2   NFPA 130-2010   UL 1666/CATVR/CMR
<b>Smoke Index Test Method</b>	IEC 61034
<b>Toxicity Index Test Method</b>	IEC 60754-1   IEC 60754-2

## Packaging and Weights

<b>Cable weight</b>	0.24 kg/m   0.161 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
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
REACH-SVHC	Compliant as per SVHC revision on <a href="http://www.commscope.com/ProductCompliance">www.commscope.com/ProductCompliance</a>
ROHS	Compliant
UK-ROHS	Compliant
UL/ETL Certification	CATVR/CMR

