# F2A-HMHR-P-W1



FSJ2-50 Jumper with interface types 4.3-10 Male and 4.3-10 Male Right Angle with HELIAX® SureGuard weatherproofing boot on straight end only, variable length

#### **Product Classification**

Product Type Wireless transmission cable assembly

**Product Series** FSJ2-50

General Specifications

Body Style, Connector AStraightBody Style, Connector BRight angleInterface, Connector A4.3-10 MaleInterface, Connector B4.3-10 Male

Specification Sheet Revision Level A

Variable Length For custom lengths contact 828-324-2200 or 1-800-982-1708 (toll free), or your local

CommScope representative

Dimensions

Nominal Size 3/8 in

**Electrical Specifications** 

**3rd Order IMD Static** -110 dBm

**3rd Order IMD Static Test Method** Two +43 dBm carriers

### VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
698-960 MHz	1.11	26.4
1700-2200 MHz	1.11	26.4
2200-2700 MHz	1.11	26.4

Jumper Assembly Sample Label

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# F2A-HMHR-P-W1



#### **Environmental Specifications**

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

Weatherproofing Method HELIAX® SureGuard weatherproofing boot

Packaging and Weights

**Included** Weatherproofing boot

Included Products

F2HM-S2 – 4.3-10 Male for 3/8 in foam coaxial cable, factory attached

F2HR-S2 - 4.3-10 Male Right Angle for 3/8 in foam and air coaxial cable, factory attached

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

jacket



# F2HM-S2

## 4.3-10 Male for 3/8 in foam coaxial cable, factory attached

#### **Product Classification**

**Product Type**Wireless and radiating connector

Product Brand HELIAX® | SureFlex®

General Specifications

Body Style Straight
Inner Contact Attachment Method Solder
Inner Contact Plating Silver

Interface 4.3-10 Male

 Outer Contact Attachment Method
 Solder

 Outer Contact Plating
 Trimetal

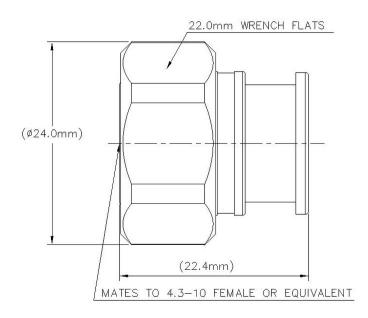
**Dimensions** 

 Length
 25.91 mm | 1.02 in

 Diameter
 23.88 mm | 0.94 in

Nominal Size 3/8 in

Outline Drawing



# **Electrical Specifications**

**3rd Order IMD at Frequency** -119 dBm @ 910 MHz

**3rd Order IMD Test Method**Two +43 dBm carriers

**Insertion Loss, typical** 0.05 dB

Cable Impedance 50 ohm

**Connector Impedance** 50 ohm

dc Test Voltage 2300 V

Inner Contact Resistance, maximum 1 m0hm

**Insulation Resistance, minimum** 5000 MOhm

**Operating Frequency Band** 0 – 6000 MHz

**Outer Contact Resistance, maximum** 1 mOhm

Peak Power, maximum 13.2 kW

**RF Operating Voltage, maximum (vrms)** 813 V

### VSWR/Return Loss

Frequency Band VSWR Return Loss (dB)

**0–3000 MHz** 1.05 34

**COMMSCOPE®** 

# F2HM-S2

**3000–4000 MHz** 1.07 30 **4000–6000 MHz** 1.12 25

## Mechanical Specifications

Connector Retention Tensile Force671.68 N | 151 lbfConnector Retention Torque2.7 N-m | 23.897 in lbCoupling Nut Proof Torque8 N-m | 70.806 in lbCoupling Nut Retention Force449.98 N | 101.16 lbf

Interface Durability 100 cycles

Mechanical Shock Test Method IEC 60068-2-27

### **Environmental Specifications**

Operating Temperature  $-55 \,^{\circ}\text{C}$  to  $+85 \,^{\circ}\text{C}$  (-67  $^{\circ}\text{F}$  to  $+185 \,^{\circ}\text{F}$ )

Storage Temperature  $-65 \,^{\circ}\text{C}$  to  $+125 \,^{\circ}\text{C}$  (-85  $^{\circ}\text{F}$  to  $+257 \,^{\circ}\text{F}$ )

Attenuation, Ambient Temperature20 °C | 68 °FAverage Power, Ambient Temperature40 °C | 104 °FAverage Power, Inner Conductor Temperature100 °C | 212 °FCorrosion Test MethodIEC 60068-2-11

Immersion Depth1 mImmersion Test MatingMated

**Immersion Test Method** IEC 60529:2001, IP68

Moisture Resistance Test Method IEC 60068-2-3

Thermal Shock Test Method IEC 60068-2-14

Vibration Test Method IEC 60068-2-6

Packaging and Weights

**Weight, net** 32.3 g | 0.071 lb

## Regulatory Compliance/Certifications

Agency	Classification
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



# F2HM-S2



# \* Footnotes

**Insertion Loss, typical** 0.05v<sup>-</sup>freq (GHz) (not applicable for elliptical waveguide)

**Immersion Depth** Immersion at specified depth for 24 hours



# F2HR-S2

## 4.3-10 Male Right Angle for 3/8 in foam and air coaxial cable, factory attached

#### **Product Classification**

**Product Type**Wireless and radiating connector

Product Brand HELIAX® | SureFlex®

General Specifications

**Body Style** Right angle

Inner Contact Attachment MethodSolderInner Contact PlatingSilver

**Interface** 4.3-10 Male

 Outer Contact Attachment Method
 Solder

 Outer Contact Plating
 Trimetal

**Dimensions** 

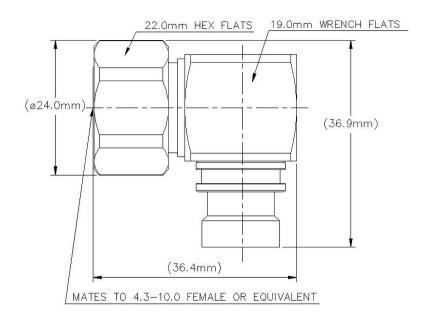
 Height
 34.29 mm | 1.35 in

 Width
 32.26 mm | 1.27 in

 Length
 23.88 mm | 0.94 in

Nominal Size 3/8 in

Outline Drawing



## **Electrical Specifications**

Inner Contact Resistance, maximum

**3rd Order IMD at Frequency** -119 dBm @ 910 MHz

**3rd Order IMD Test Method** Two +43 dBm carriers

**Insertion Loss, typical** 0.05 dB

Average Power at Frequency 676.0 W @ 900 MHz

1 m0hm

Cable Impedance50 ohmConnector Impedance50 ohm

dc Test Voltage 2300 V

Insulation Resistance, minimum 5000 MOhm

**Operating Frequency Band** 0 – 6000 MHz

Outer Contact Resistance, maximum 1 m0hm

Peak Power, maximum 13.2 kW

**RF Operating Voltage, maximum (vrms)** 813 V

**Shielding Effectiveness** -110 dB

VSWR/Return Loss



# F2HR-S2

Frequency Band	VSWR	Return Loss (dB)
0-960 MHz	1.04	35
1710-2200 MHz	1.05	33
2200-2700 MHz	1.07	30
2700-3000 MHz	1.07	30
3000-6000 MHz	1.23	20

## Mechanical Specifications

Connector Retention Tensile Force671.68 N | 151 lbfConnector Retention Torque2.7 N-m | 23.897 in lbCoupling Nut Proof Torque8 N-m | 70.806 in lbCoupling Nut Retention Force449.98 N | 101.16 lbfInterface Durability100 cycles

Interface Durability Method IEC 61169-4:17

Mechanical Shock Test Method IEC 60068-2-27

## **Environmental Specifications**

Operating Temperature $-55 \,^{\circ}\text{C}$  to  $+85 \,^{\circ}\text{C}$  (-67  $^{\circ}\text{F}$  to  $+185 \,^{\circ}\text{F}$ )Storage Temperature $-65 \,^{\circ}\text{C}$  to  $+125 \,^{\circ}\text{C}$  (-85  $^{\circ}\text{F}$  to  $+257 \,^{\circ}\text{F}$ )

Attenuation, Ambient Temperature20 °C | 68 °FAverage Power, Ambient Temperature40 °C | 104 °FAverage Power, Inner Conductor Temperature100 °C | 212 °FCorrosion Test MethodIEC 60068-2-11

Immersion Depth1 mImmersion Test MatingMated

Immersion Test Method IEC 60529:2001, IP68

Moisture Resistance Test MethodIEC 60068-2-3Thermal Shock Test MethodIEC 60068-2-14Vibration Test MethodIEC 60068-2-6

Packaging and Weights

**Weight, net** 65.47 g | 0.144 lb

Regulatory Compliance/Certifications

**COMMSCOPE®** 

# F2HR-S2

Agency Classification

CHINA-ROHS Below maximum concentration value

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

ROHS Compliant



# \* Footnotes

**Insertion Loss, typical** 0.05v<sup>-</sup>freq (GHz) (not applicable for elliptical waveguide)

**Immersion Depth** Immersion at specified depth for 24 hours



# FSJ2-50



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

#### **Product Classification**

 Product Type
 Coaxial wireless cable

 Product Brand
 HELIAX® | SureFlex®

**Product Series** FSJ2-50

General Specifications

**Flexibility** Superflexible

Jacket Color Black

**Dimensions** 

Diameter Over Dielectric7.112 mm | 0.28 inDiameter Over Jacket10.541 mm | 0.415 inInner Conductor OD2.794 mm | 0.11 inOuter Conductor OD9.652 mm | 0.38 in

Nominal Size 3/8 in

**Electrical Specifications** 

Cable Impedance50 ohm ±1 ohm

**Capacitance** 79.7 pF/m | 24.293 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

 $\label{eq:local_potential} \mbox{Inductance} \qquad \qquad 0.2 \ \mu\mbox{H/m} \ \mid \ 0.061 \ \mu\mbox{H/ft}$ 

**Insulation Resistance** 100000 MOhms-km

Jacket Spark Test Voltage (rms) 4000 V

Operating Frequency Band 1 – 13400 MHz

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# FSJ2-50

 Peak Power
 13.2 kW

 Velocity
 83 %

#### VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
2.5-2.7 GHz	1.11	26
680-800 MHz	1.11	26
800-960 MHz	1.11	26
1700-2200 MHz	1.1	26.45

## Material Specifications

Dielectric MaterialFoam PEJacket MaterialPE

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, minimum20Number of Bends, typical50

 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 $-55 \, ^{\circ}\text{C}$  to  $+85 \, ^{\circ}\text{C}$  ( $-67 \, ^{\circ}\text{F}$  to  $+185 \, ^{\circ}\text{F}$ )Storage Temperature $-70 \, ^{\circ}\text{C}$  to  $+85 \, ^{\circ}\text{C}$  ( $-94 \, ^{\circ}\text{F}$  to  $+185 \, ^{\circ}\text{F}$ )

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 $212 \, ^{\circ}\text{F} \mid 100 \, ^{\circ}\text{C}$ 

Packaging and Weights

COMMSC PE°

# FSJ2-50

**Cable weight** 0.12 kg/m | 0.081 lb/ft

# Regulatory Compliance/Certifications

Agency Classification

CHINA-ROHS Below maximum concentration value

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

ROHS Compliant



