F2R-HRDF-P

Base Product

FSJ2RK-50 Jumper with interface types 7/16 DIN Female and 4.3-10 Male Right Angle, variable length

Product Classification

Product Type	Wireless transmission cable assembly
Product Series	FSJ2-50

General Specifications

Body Style, Connector A	Straight
Body Style, Connector B	Right angle
Interface, Connector A	7-16 DIN Female
Interface, Connector B	4.3-10 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 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

F2R-HRDF-P

Environmental Specifications

EN50575 CPR Cable EuroClass Fire Performance	B2ca
EN50575 CPR Cable EuroClass Smoke Rating	s1a
EN50575 CPR Cable EuroClass Droplets Rating	d0
EN50575 CPR Cable EuroClass Acidity Rating	a1
Immersion Test Method	Meets IEC 60529:2001, IP68 in mated condition

Included Products

F2HR-S2	–	4.3-10 Male Right Angle for 3/8 in foam and air coaxial cable, factory attached
F2TDF-LS	–	7-16 DIN Female for 3/8 in foam and air coaxial cable, factory attached
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

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®

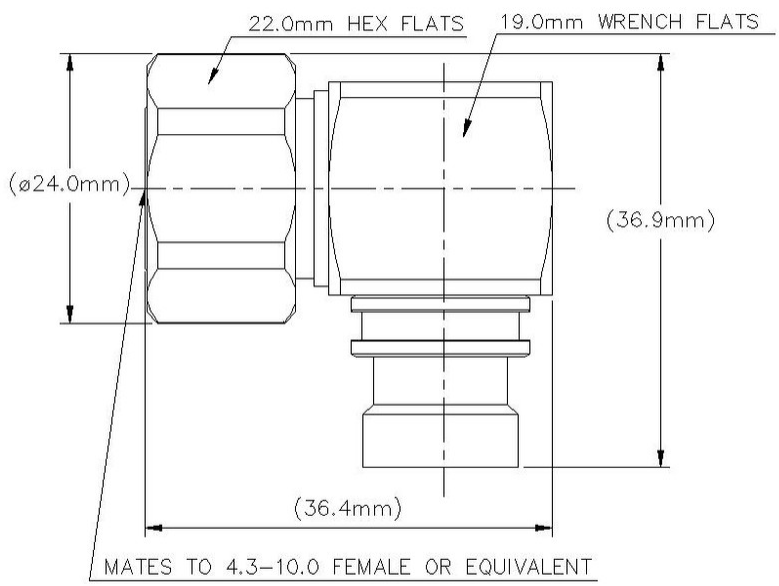
General Specifications

Body Style	Right angle
Inner Contact Attachment Method	Solder
Inner Contact Plating	Silver
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

3rd Order IMD at Frequency	-119 dBm @ 910 MHz
3rd Order IMD Test Method	Two +43 dBm carriers
Insertion Loss Coefficient, typical	0.05
Average Power at Frequency	676.0 W @ 900 MHz
Cable Impedance	50 ohm
Connector Impedance	50 ohm
dc Test Voltage	2300 V
Inner Contact Resistance, maximum	1 mOhm
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
Shielding Effectiveness	-110 dB

VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
0–960 MHz	1.036	35.05
1710–2200 MHz	1.046	32.96
2200–2700 MHz	1.065	30.04
2700–3000 MHz	1.065	30.04
3000–6000 MHz	1.222	20.01

Mechanical Specifications

Connector Retention Tensile Force	671.68 N | 151 lbf
Connector Retention Torque	2.7 N-m | 23.897 in lb
Coupling Nut Proof Torque	8 N-m | 70.806 in lb
Coupling Nut Retention Force	449.98 N | 101.16 lbf
Interface Durability	100 cycles
Interface Durability Method	IEC 61169-4:17
Mechanical Shock Test Method	IEC 60068-2-27

Environmental Specifications

Operating Temperature	-55 °C to +85 °C (-67 °F to +185 °F)
Storage Temperature	-65 °C to +125 °C (-85 °F to +257 °F)
Attenuation, Ambient Temperature	20 °C | 68 °F
Average Power, Ambient Temperature	40 °C | 104 °F
Average Power, Inner Conductor Temperature	100 °C | 212 °F
Corrosion Test Method	IEC 60068-2-11
Immersion Depth	1 m
Immersion Test Mating	Mated
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	65.47 g | 0.144 lb

Regulatory Compliance/Certifications

F2HR-S2

Agency	Classification
CHINA-ROHS	Above maximum concentration value
ROHS	Compliant/Exempted
UK-ROHS	Compliant

* Footnotes

Insertion Loss Coefficient, typical	0.05√¯freq (GHz) (not applicable for elliptical waveguide)
Immersion Depth	Immersion at specified depth for 24 hours

F2TDF-LS

7-16 DIN Female 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

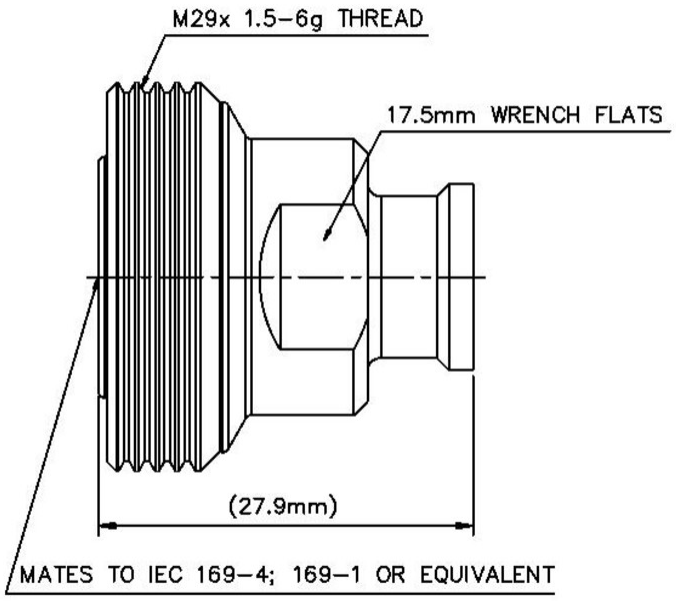
Body Style	Straight
Inner Contact Attachment Method	Solder
Inner Contact Plating	Silver
Interface	7-16 DIN Female
Outer Contact Attachment Method	Solder
Outer Contact Plating	Trimetal
Pressurizable	No

Dimensions

Length	27.94 mm | 1.1 in
Diameter	28.96 mm | 1.14 in
Nominal Size	3/8 in

Outline Drawing

F2TDF-LS



Electrical Specifications

3rd Order IMD at Frequency	-112 dBm @ 910 MHz
3rd Order IMD Test Method	Two +43 dBm carriers
Insertion Loss Coefficient, typical	0.05
Average Power at Frequency	0.7 kW @ 900 MHz
Cable Impedance	50 ohm
Connector Impedance	50 ohm
dc Test Voltage	2300 V
Inner Contact Resistance, maximum	0.4 mOhm
Insulation Resistance, minimum	10000 MOhm
Operating Frequency Band	0 – 6000 MHz
Outer Contact Resistance, maximum	1.5 mOhm
Peak Power, maximum	13.2 kW
RF Operating Voltage, maximum (vrms)	813 V
Shielding Effectiveness	-110 dB

VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)

0–960 MHz	1.036	35.05
1710–2200 MHz	1.046	32.96
2200–2700 MHz	1.065	30.04
2700–3000 MHz	1.065	30.04
3000–6000 MHz	1.152	23.02

Mechanical Specifications

Connector Retention Tensile Force	934.13 N | 210 lbf
Connector Retention Torque	2.3 N-m | 20.357 in lb
Coupling Nut Proof Torque	35 N-m | 309.776 in lb
Coupling Nut Proof Torque Method	IEC 61169-16:9.3.11
Coupling Nut Retention Force	1000 N | 224.81 lbf
Coupling Nut Retention Force Method	IEC 61169-15:9.3.11
Insertion Force	199.99 N | 44.96 lbf
Insertion Force Method	IEC 61169-15:9.3.5
Interface Durability	500 cycles
Interface Durability Method	IEC 61169-4:17
Mechanical Shock Test Method	IEC 60068-2-27

Environmental Specifications

Operating Temperature	-55 °C to +85 °C (-67 °F to +185 °F)
Storage Temperature	-65 °C to +125 °C (-85 °F to +257 °F)
Attenuation, Ambient Temperature	20 °C | 68 °F
Average Power, Ambient Temperature	40 °C | 104 °F
Average Power, Inner Conductor Temperature	100 °C | 212 °F
Corrosion Test Method	IEC 60068-2-11
Immersion Depth	1 m
Immersion Test Mating	Mated
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

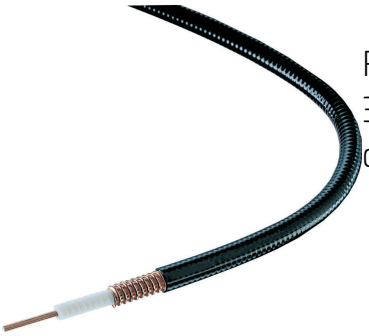
Packaging and Weights

Weight, net	44.69 g | 0.099 lb

* Footnotes

Insertion Loss Coefficient, typical	0.05√¯freq (GHz) (not applicable for elliptical waveguide)
Immersion Depth	Immersion at specified depth for 24 hours

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

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 Impedance	50 ohm ±1 ohm
Capacitance	80 pF/m | 24.384 pF/ft
dc Resistance, Inner Conductor	4.232 ohms/km | 1.29 ohms/kft
dc Resistance, Outer Conductor	4.987 ohms/km | 1.52 ohms/kft
dc Test Voltage	2300 V
Inductance	0.2 µH/m | 0.061 µH/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

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 Bends	25.4 mm | 1 in
Minimum Bend Radius, single Bend	25.4 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 °C to +60 °C (-40 °F to +140 °F)
Operating Temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Storage Temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Attenuation, Ambient Temperature	68 °F | 20 °C
Average Power, Ambient Temperature	104 °F | 40 °C
Average Power, Inner Conductor Temperature	212 °F | 100 °C

EN50575 CPR Cable EuroClass Fire Performance	B2ca
EN50575 CPR Cable EuroClass Smoke Rating	s1a
EN50575 CPR Cable EuroClass Droplets Rating	d0
EN50575 CPR Cable EuroClass Acidity Rating	a1
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