F1-PSMSR-HF

Base Product

FSJ1-50A Jumper with interface types SMA Male and SMA Male Right Angle, variable length

Product Classification

Product Type	Wireless transmission cable assembly
Product Series	FSJ1-50A

General Specifications

Body Style, Connector A	Straight
Body Style, Connector B	Right angle
Interface, Connector A	SMA Male
Interface, Connector B	SMA 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	1/4 in

VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
0–3000 MHz	1.222	20
3000–6000 MHz	1.329	17
6000–13600 MHz	1.925	10
13600–18000 MHz	2.204	8.5

Jumper Assembly Sample Label

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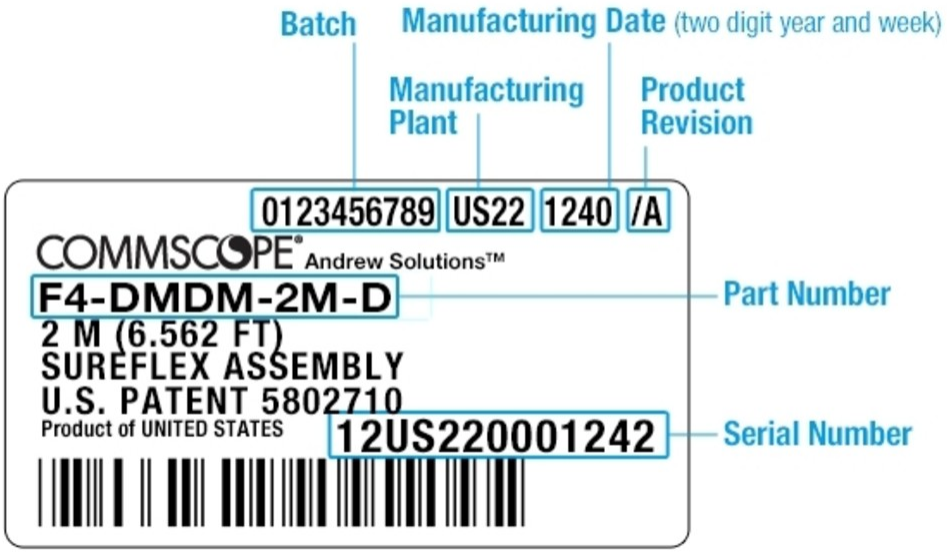
F1-PSMSR-HF



Environmental Specifications

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

Included Products

F1TSM-C	–	SMA Male for 1/4 in FSJ1-50A cable
F1TSR-HF	–	SMA Male Right Angle for 1/4 in FSJ1-50A cable
FSJ1-50A	–	FSJ1-50A, HELIAX® Superflexible Low Density Foam Coaxial Cable, corrugated copper, 1/4 in, black PE jacket

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F1TSM-C

SMA Male for 1/4 in FSJ1-50A cable

Product Classification

Product Type	Wireless and radiating connector
Product Brand	HELIAX®
Product Series	FSJ1-50A

General Specifications

Body Style	Straight
Cable Family	FSJ1-50A
Inner Contact Attachment Method	Captivated
Inner Contact Plating	Gold
Interface	SMA Male
Mounting Angle	Straight
Outer Contact Attachment Method	Self-clamping
Outer Contact Plating	Trimetal
Pressurizable	No

Dimensions

Height	14.22 mm | 0.56 in
Width	14.22 mm | 0.56 in
Length	36.58 mm | 1.44 in
Diameter	14.22 mm | 0.56 in
Nominal Size	1/4 in

Outline Drawing

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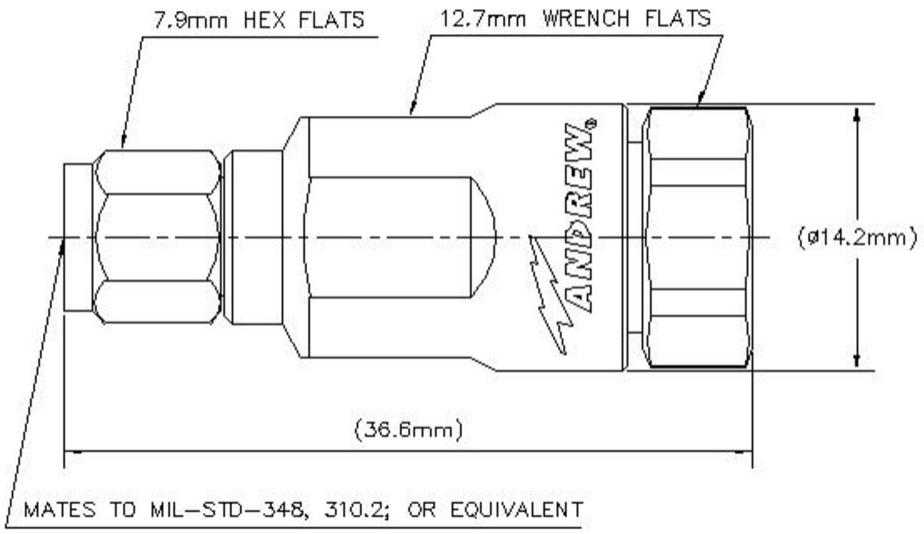
F1TSM-C



Electrical Specifications

Average Power at Frequency	0.4 kW @ 900 MHz
Cable Impedance	50 ohm
Connector Impedance	50 ohm
dc Test Voltage	1000 V
Inner Contact Resistance, maximum	3 mOhm
Insulation Resistance, minimum	5000 MOhm
Operating Frequency Band	0 – 6000 MHz
Outer Contact Resistance, maximum	2.5 mOhm
Peak Power, maximum	5 kW
RF Operating Voltage, maximum (vrms)	500 V
Shielding Effectiveness	-110 dB

VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
0–3000 MHz	1.173	21.98
3000–6000 MHz	1.222	20.01
6000–9000 MHz	1.29	18

Mechanical Specifications

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Connector Retention Tensile Force	449.27 N | 101 lbf
Coupling Nut Proof Torque	1.7 N-m | 15.046 in lb
Coupling Nut Proof Torque Method	IEC 61169-16:9.3.11
Coupling Nut Retention Force	266.98 N | 60.02 lbf
Coupling Nut Retention Force Method	IEC 61169-15:9.3.11
Insertion Force	97.86 N | 22 lbf
Insertion Force Method	IEC 61169-16:9.3.5
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
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	24.99 g | 0.055 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
UK-ROHS	Compliant/Exempted

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COMMSCOPE®

F1TSR-HF

SMA Male Right Angle for 1/4 in FSJ1-50A cable

Product Classification

Product Type	Wireless and radiating connector
Product Brand	HELIAX®
Product Series	FSJ1-50A

General Specifications

Body Style	Right angle
Cable Family	FSJ1-50A
Inner Contact Attachment Method	Solder
Inner Contact Plating	Gold
Interface	SMA Male
Outer Contact Attachment Method	Clamp
Outer Contact Plating	Trimetal
Pressurizable	No

Dimensions

Height	18.8 mm | 0.74 in
Width	10.92 mm | 0.43 in
Length	20.83 mm | 0.82 in
Right Angle Length	18.8 mm | 0.74 in
Nominal Size	1/4 in

Outline Drawing

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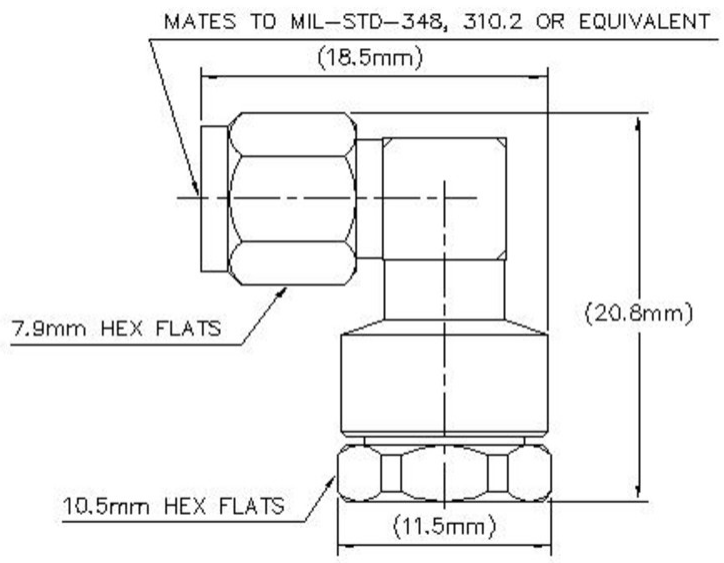
F1TSR-HF



Electrical Specifications

Average Power at Frequency	0.4 kW @ 900 MHz
Cable Impedance	50 ohm
Connector Impedance	50 ohm
dc Test Voltage	1000 V
Inner Contact Resistance, maximum	3 mOhm
Insulation Resistance, minimum	5000 MOhm
Operating Frequency Band	0 – 18000 MHz
Outer Contact Resistance, maximum	2.5 mOhm
Peak Power, maximum	2.5 kW
RF Operating Voltage, maximum (vrms)	565 V

VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
45–2700 MHz	1.058	31
2700–4000 MHz	1.065	30.04
4000–6000 MHz	1.119	25.01
6000–9000 MHz	1.196	20.99
9000–10200 MHz	1.222	20.01

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10000–12000 MHz	1.26	19
12000–16200 MHz	1.29	18
16200–18000 MHz	1.433	14.99

Mechanical Specifications

Connector Retention Tensile Force	449.27 N | 101 lbf
Coupling Nut Proof Torque	1.7 N-m | 15.046 in lb
Coupling Nut Proof Torque Method	IEC 61169-15:9.3.6
Coupling Nut Retention Force	180.02 N | 40.47 lbf
Coupling Nut Retention Force Method	IEC 61169-15:9.3.11
Insertion Force	22.02 N | 4.95 lbf
Insertion Force Method	IEC 61169-15:9.3.5
Interface Durability	500 cycles
Interface Durability Method	IEC 61169-15:9.5
Mechanical Shock Test Method	IEC 60068-2-27

Environmental Specifications

Operating Temperature	-40 °C to +85 °C (-40 °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
Moisture Resistance Test Method	IEC 60068-2-3
Thermal Shock Test Method	IEC 60068-2-14
Vibration Test Method	IEC 60068-2-6
Water Jetting Test Mating	Mated
Water Jetting Test Method	IEC 60529:2001, IP65

Packaging and Weights

Weight, net	8.76 g | 0.019 lb

Regulatory Compliance/Certifications

Agency	**Classification**

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

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FSJ1-50A

FSJ1-50A, HELIAX® Superflexible Low Density Foam Coaxial Cable, corrugated copper, 1/4 in, black PE jacket

Product Classification

Product Type	Coaxial wireless cable
Product Brand	HELIAX® | SureFlex®
Product Series	FSJ1-50A | MLOC

General Specifications

Product Number	887009902/00 | SZ887009902/00
Flexibility	Superflexible
Jacket Color	Black
Performance Note	Attenuation values typical, guaranteed within 5%

Dimensions

Diameter Over Dielectric	4.826 mm | 0.19 in
Diameter Over Jacket	7.366 mm | 0.29 in
Inner Conductor OD	1.905 mm | 0.075 in
Outer Conductor OD	6.35 mm | 0.25 in
Nominal Size	1/4 in

Electrical Specifications

Cable Impedance	50 ohm ±1 ohm
Capacitance	79.4 pF/m | 24.201 pF/ft
dc Resistance, Inner Conductor	9.843 ohms/km | 3 ohms/kft
dc Resistance, Outer Conductor	7.216 ohms/km | 2.199 ohms/kft
dc Test Voltage	1600 V
Inductance	0.2 µH/m | 0.061 µH/ft

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Insulation Resistance	100000 MOhms-km
Jacket Spark Test Voltage (rms)	5000 V
Operating Frequency Band	1 – 18000 MHz
Peak Power	6.4 kW
Velocity	82 %

VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
680–960 MHz	1.201	20.8
1700–2200 MHz	1.201	20.8
2200–2700 MHz	1.433	15

Material Specifications

Dielectric Material	Foam PE
Jacket Material	PE
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	15
Number of Bends, typical	20
Tensile Strength	68 kg | 149.914 lb
Bending Moment	0.7 N-m | 6.196 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	-55 °C to +85 °C (-67 °F to +185 °F)
Storage Temperature	-70 °C to +85 °C (-94 °F to +185 °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

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Packaging and Weights

Cable weight	0.07 kg/m | 0.047 lb/ft

Regulatory Compliance/Certifications

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CHINA-ROHS	Below maximum concentration value
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ROHS	Compliant
UK-ROHS	Compliant
UL/ETL Certification	Compliant

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