

# F1-PTMSM-HF



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

## Product Classification

**Product Series** FSJ1-50A  
**Product Type** SureFlex® standard

## General Specifications

**Body Style, Connector A** Straight  
**Body Style, Connector B** Straight  
**Interface, Connector A** TNC Male  
**Interface, Connector B** SMA Male  
**Length** 0.000 m | 0.000 ft  
**Nominal Size** 1/4 in  
**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

## Environmental Specifications

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

## Jumper Assembly Sample Label

**Batch** 0123456789 **Manufacturing Date** (two digit year and week) US22 1240 **Product Revision** /A

**Part Number** F4-DMDM-2M-D

**Serial Number** 12US220001242

COMMSCOPE® Andrew Solutions™  
2 M (6.562 FT)  
SUREFLEX ASSEMBLY  
U.S. PATENT 5802710  
Product of UNITED STATES

# F1-PTMSM-HF

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## Return Loss/VSWR

Frequency Band	VSWR	Return Loss (dB)
10–18000 MHz	1.92	10.00

## Regulatory Compliance/Certifications

### Agency

RoHS 2011/65/EU

ISO 9001:2015

China RoHS SJ/T 11364-2014

### Classification

Compliant by Exemption

Designed, manufactured and/or distributed under this quality management system

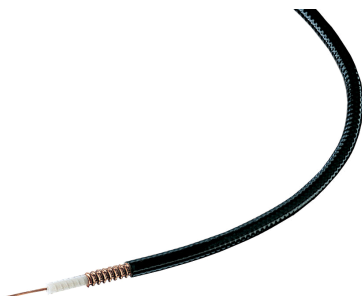
Above Maximum Concentration Value (MCV)



## Included Products

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

# FSJ1-50A



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

## Product Classification

<b>Brand</b>	HELIAX®   SureFlex®
<b>Product Series</b>	FSJ1-50A
<b>Product Type</b>	Coaxial wireless cable

## Construction Materials

<b>Jacket Material</b>	PE
<b>Outer Conductor Material</b>	Corrugated copper
<b>Dielectric Material</b>	Foam PE
<b>Flexibility</b>	Superflexible
<b>Inner Conductor Material</b>	Copper-clad aluminum wire
<b>Jacket Color</b>	Black

## Dimensions

<b>Nominal Size</b>	1/4 in
<b>Cable Length</b>	0 km
<b>Cable Weight</b>	0.05 lb/ft   0.07 kg/m
<b>Diameter Over Dielectric</b>	4.826 mm   0.190 in
<b>Diameter Over Jacket</b>	7.366 mm   0.290 in
<b>Inner Conductor OD</b>	1.9050 mm   0.0750 in
<b>Outer Conductor OD</b>	6.350 mm   0.250 in

## Electrical Specifications

<b>Cable Impedance</b>	50 ohm $\pm$ 1 ohm
<b>Capacitance</b>	24.2 pF/ft   79.4 pF/m
<b>dc Resistance, Inner Conductor</b>	3.000 ohms/kft   9.843 ohms/km
<b>dc Resistance, Outer Conductor</b>	2.200 ohms/kft   7.216 ohms/km
<b>dc Test Voltage</b>	1600 V
<b>Inductance</b>	0.200 $\mu$ H/m   0.061 $\mu$ H/ft
<b>Insulation Resistance</b>	100000 Mohms•km
<b>Jacket Spark Test Voltage (rms)</b>	5000 V

# FSJ1-50A

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<b>Operating Frequency Band</b>	1 – 18000 MHz
<b>Peak Power</b>	6.4 kW
<b>Velocity</b>	82%

## Environmental Specifications

<b>Installation Temperature</b>	-40 °C to +60 °C (-40 °F to +140 °F)
<b>Operating Temperature</b>	-55 °C to +85 °C (-67 °F to +185 °F)
<b>Storage Temperature</b>	-70 °C to +85 °C (-94 °F to +185 °F)

## Mechanical Specifications

<b>Bending Moment</b>	0.7 N-m   0.5 ft lb
<b>Flat Plate Crush Strength</b>	100.0 lb/in   1.8 kg/mm
<b>Minimum Bend Radius, Multiple Bends</b>	25.40 mm   1.00 in
<b>Minimum Bend Radius, Single Bend</b>	25.40 mm   1.00 in
<b>Number of Bends, minimum</b>	15
<b>Number of Bends, typical</b>	20
<b>Tensile Strength</b>	68 kg   150 lb

## Note

<b>Performance Note</b>	Values typical, unless otherwise stated
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## Standard Conditions

<b>Attenuation, Ambient Temperature</b>	20 °C   68 °F
<b>Average Power, Ambient Temperature</b>	40 °C   104 °F
<b>Average Power, Inner Conductor Temperature</b>	100 °C   212 °F

## Return Loss/VSWR

<b>Frequency Band</b>	<b>VSWR</b>	<b>Return Loss (dB)</b>
680–960 MHz	1.2	20.80
1700–2200 MHz	1.2	20.80
2200–2700 MHz	1.43	15.00

## Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
0.5	0.407	0.124	6.40
1	0.577	0.176	6.40
1.5	0.707	0.215	6.40
2	0.816	0.249	6.40
10	1.833	0.559	3.99
20	2.6	0.792	2.81
30	3.192	0.973	2.29
50	4.136	1.261	1.77
85	5.419	1.652	1.35
88	5.516	1.681	1.33
100	5.889	1.795	1.24
108	6.125	1.867	1.19
150	7.25	2.21	1.01
174	7.825	2.385	0.93
200	8.408	2.563	0.87
204	8.495	2.589	0.86
300	10.373	3.162	0.71
400	12.051	3.673	0.61
450	12.817	3.906	0.57
460	12.965	3.952	0.56
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500	13.545	4.128	0.54
512	13.715	4.18	0.53
600	14.909	4.544	0.49
700	16.175	4.93	0.45
800	17.362	5.292	0.42
824	17.637	5.376	0.41
894	18.42	5.614	0.40
960	19.134	5.832	0.38
1000	19.556	5.96	0.37
1218	21.738	6.626	0.34
1250	22.044	6.719	0.33
1500	24.326	7.414	0.30
1700	26.038	7.936	0.28
1794	26.813	8.172	0.27
1800	26.862	8.187	0.27
2000	28.455	8.673	0.26
2100	29.227	8.908	0.25
2200	29.984	9.139	0.24
2300	30.727	9.365	0.24
2500	32.174	9.806	0.23
2700	33.576	10.233	0.22
3000	35.602	10.851	0.21
3400	38.183	11.638	0.19
3700	40.041	12.204	0.18

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3800	40.647	12.389	0.18
4000	41.841	12.753	0.17
5000	47.5	14.477	0.15
6000	52.747	16.077	0.14
8000	62.37	19.01	0.12
8800	65.974	20.108	0.11
10000	71.173	21.693	0.10
12000	79.393	24.198	0.09
14000	87.172	26.569	0.08
15800	93.872	28.611	0.08
16000	94.601	28.833	0.08
18000	101.745	31.01	0.07

\* Values typical, guaranteed within 5%

## Regulatory Compliance/Certifications

### Agency

UL/ETL Certification

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ISO 9001:2015

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Compliant

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