F1-PBMBM-5

FSJ1-50A SureFlex® Jumper with interface types BNC Male and BNC

Male, 5 FT

Product Classification

Product Type SureFlex® standard

Product Brand HELIAX®
Product Series FSJ1-50A

General Specifications

Body Style, Connector A Straight

Body Style, Connector B Straight

Interface, Connector A BNC Male

Interface, Connector B BNC Male

Specification Sheet Revision Level A

Dimensions

Length 1.524 m | 5 ft

Nominal Size 1/4 in

VSWR/Return Loss

Frequency Band VSWR Return Loss (dB)

700–3000 MHz 1.222 20.01

Jumper Assembly Sample Label



F1-PBMBM-5



Environmental Specifications

Immersion Test Method

Meets IEC 60529:2001, IP68 in mated condition

Regulatory Compliance/Certifications

Agency	Classification
CHINA-ROHS	Above maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
ROHS	Compliant/Exempted
UK-ROHS	Compliant/Exempted



Included Products

F1TBM-C – BNC Male for 1/4 in FSJ1-50A cable

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

black PE jacket



F1TBM-C

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



Product Classification

Product TypeWireless and radiating connector

Product BrandHELIAX®Product SeriesFSJ1-50A

General Specifications

Body StyleStraightCable FamilyFSJ1-50AInner Contact Attachment MethodCaptivated

Inner Contact Plating Gold

InterfaceBNC MaleMounting AngleStraight

Outer Contact Attachment Method Self-clamping

 Outer Contact Plating
 Trimetal

 Pressurizable
 No

Dimensions

 Height
 14.48 mm | 0.57 in

 Width
 14.48 mm | 0.57 in

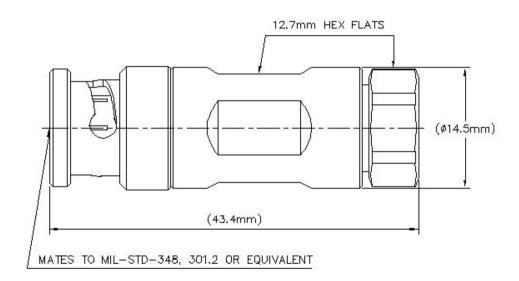
 Length
 43.43 mm | 1.71 in

 Diameter
 14.48 mm | 0.57 in

Nominal Size 1/4 in

Outline Drawing





Electrical Specifications

Average Power at Frequency 0.4 kW @ 900 MHz

Cable Impedance50 ohmConnector Impedance50 ohmdc Test Voltage1500 VInner Contact Resistance, maximum2.5 mOhm

Insulation Resistance, minimum 5000 MOhm
Operating Frequency Band 0 - 4000 MHz

 Outer Contact Resistance, maximum
 1 m0hm

 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)
0-2000 MHz	1.119	25.01
2000-3000 MHz	1.119	25.01
3000-4000 MHz	1.152	23.02

Mechanical Specifications

COMMSC PE®

F1TBM-C

Connector Retention Tensile Force449.27 N | 101 lbfCoupling Nut Proof Torque0.6 N-m | 5.31 in lbCoupling Nut Proof Torque MethodIEC 61169-16:9.3.11Coupling Nut Retention Force445 N | 100.04 lbfCoupling Nut Retention Force MethodIEC 61169-17:9.3.11Insertion Force66.72 N | 15 lbfInsertion Force MethodIEC 61169-16:9.3.5

Interface Durability500 cyclesInterface Durability MethodIEC 61169-4:17Mechanical Shock Test MethodIEC 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 Temperature

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

Packaging and Weights

Weight, net 32 g | 0.071 lb

Regulatory Compliance/Certifications

AgencyClassificationCHINA-ROHSBelow maximum concentration valueISO 9001:2015Designed, manufactured and/or distributed under this quality management systemREACH-SVHCCompliant as per SVHC revision on www.commscope.com/ProductComplianceROHSCompliantUK-ROHSCompliant/Exempted



COMMSCOPE®



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 NoteAttenuation 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 $0.2 \mu H/m \mid 0.061 \mu H/ft$

COMMSC PE°

Insulation Resistance 100000 MOhms-km

Jacket Spark Test Voltage (rms) 5000 V

Operating Frequency Band 1 – 18000 MHz

Peak Power6.4 kWVelocity82 %

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

Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
1.0	0.577	0.176	6.4
1.5	0.707	0.215	6.4
2.0	0.816	0.249	6.4
10.0	1.833	0.559	3.99
20.0	2.6	0.792	2.81
30.0	3.192	0.973	2.29
50.0	4.136	1.261	1.77
85.0	5.419	1.652	1.35
88.0	5.516	1.681	1.33
100.0	5.889	1.795	1.24
108.0	6.125	1.867	1.19
150.0	7.25	2.21	1.01
174.0	7.825	2.385	0.93
200.0	8.408	2.563	0.87
204.0	8.495	2.589	0.86
300.0	10.373	3.162	0.71
400.0	12.051	3.673	0.61
450.0	12.817	3.906	0.57
460.0	12.965	3.952	0.56
500.0	13.545	4.128	0.54
512.0	13.715	4.18	0.53

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600.0	14.909	4.544	0.49
700.0	16.175	4.93	0.45
800.0	17.362	5.292	0.42
824.0	17.637	5.376	0.41
894.0	18.42	5.614	0.4
960.0	19.134	5.832	0.38
1000.0	19.556	5.96	0.37
1218.0	21.738	6.626	0.34
1250.0	22.044	6.719	0.33
1500.0	24.326	7.414	0.3
1700.0	26.038	7.936	0.28
1794.0	26.813	8.172	0.27
1800.0	26.862	8.187	0.27
2000.0	28.455	8.673	0.26
2100.0	29.227	8.908	0.25
2200.0	29.984	9.139	0.24
2300.0	30.727	9.365	0.24
2500.0	32.174	9.806	0.23
2700.0	33.576	10.233	0.22
3000.0	35.602	10.851	0.21
3400.0	38.183	11.638	0.19
3600.0	39.428	12.017	0.19
3700.0	40.041	12.204	0.18
3800.0	40.647	12.389	0.18
3900.0	41.247	12.571	0.18
4000.0	41.841	12.753	0.17
4100.0	42.429	12.932	0.17
4200.0	43.012	13.11	0.17
4300.0	43.59	13.286	0.17
4400.0	44.163	13.46	0.17
4500.0	44.73	13.633	0.16
4600.0	45.293	13.805	0.16
4700.0	45.852	13.975	0.16
4800.0	46.405	14.144	0.16
4900.0	46.955	14.311	0.16

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5000.0	47.5	14.477	0.15
6000.0	52.747	16.077	0.14
8000.0	62.37	19.01	0.12
8800.0	65.974	20.108	0.11
10000.0	71.173	21.693	0.1
12000.0	79.393	24.198	0.09
14000.0	87.172	26.569	0.08
15800.0	93.872	28.611	0.08
16000.0	94.601	28.833	0.08
18000.0	101.745	31.01	0.07

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 Bends25.4 mm | 1 inMinimum Bend Radius, single Bend25.4 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 $-40 \,^{\circ}\text{C}$ 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 Temperature68 °F | 20 °CAverage Power, Ambient Temperature104 °F | 40 °CAverage Power, Inner Conductor Temperature212 °F | 100 °C



Packaging and Weights

 $\textbf{Cable weight} \hspace{1.5cm} 0.07 \text{ kg/m} \hspace{0.2cm} \mid \hspace{0.2cm} 0.047 \text{ lb/ft}$

Regulatory Compliance/Certifications

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
UL/ETL Certification Compliant





