PTS1P-NMNM-1M-P

PTS1-50-P SureFlex® Jumper with interface types N Male and N Male, 1M

Product Classification

Product Type	SureFlex® Premium, static PIM
Product Brand	HELIAX® | SureFlex®
Product Series	PTS1-50-P

General Specifications

Body Style, Connector A	Straight
Body Style, Connector B	Straight
Interface, Connector A	N Male
Interface, Connector B	N Male
Specification Sheet Revision Level	A

Dimensions

Length	1 m | 3.281 ft
Nominal Size	1/4 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	1.152	23.02
1700–2200 MHz	1.152	23.02
2200–2700 MHz	1.152	23.02

Jumper Assembly Sample Label

PTS1P-NMNM-1M-P

Environmental Specifications

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

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.andrew.com/ProductCompliance
ROHS	Compliant
UK-ROHS	Compliant

Included Products

F1TNM-LS	–	Type N Male for 1/4 in foam and air coaxial cable, factory attached
PTS1-50-P	–	PTS1-50, HELIAX® Superflexible High Power, High Temperature 50 Ohm Plenum Rated Coaxial Cable, corrugated copper, 1/4 in, white FR-PVC jacket.

F1TNM-LS

Type N Male for 1/4 in foam and air coaxial cable, factory attached

Product Classification

Product Type	Wireless and radiating connector
Product Brand	HELIAX® | SureFlex®

General Specifications

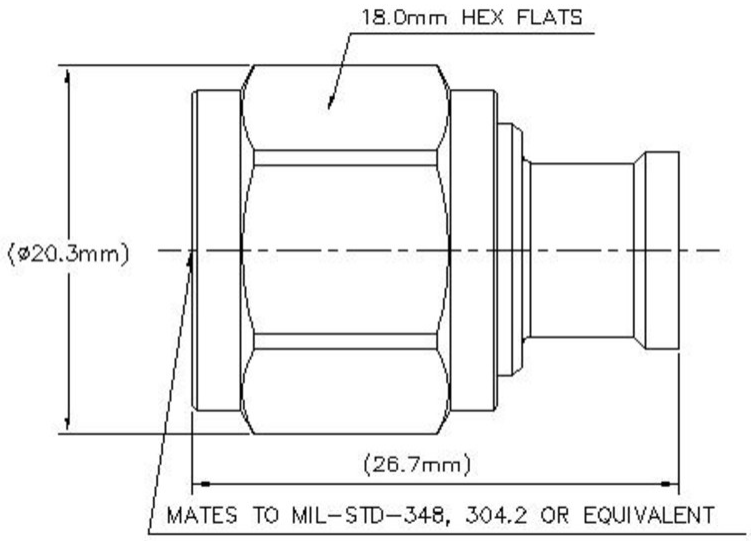
Body Style	Straight
Inner Contact Attachment Method	Solder
Inner Contact Plating	Silver
Interface	N Male
Outer Contact Attachment Method	Solder
Outer Contact Plating	Trimetal
Pressurizable	No

Dimensions

Length	26.67 mm | 1.05 in
Diameter	20.32 mm | 0.8 in
Nominal Size	1/4 in

F1TNM-LS

Outline Drawing



Electrical Specifications

3rd Order IMD at Frequency	-110 dBm @ 910 MHz
Insertion Loss Coefficient, typical	0.05
Average Power at Frequency	0.4 kW @ 900 MHz
Cable Impedance	50 ohm
Connector Impedance	50 ohm
dc Test Voltage	1600 V
Inner Contact Resistance, maximum	1 mOhm
Insulation Resistance, minimum	5000 MOhm
Operating Frequency Band	0 – 6000 MHz
Outer Contact Resistance, maximum	0.25 mOhm
Peak Power, maximum	6.4 kW
RF Operating Voltage, maximum (vrms)	565 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	667.23 N | 150 lbf
Connector Retention Torque	1.1 N-m | 9.736 in lb
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	445 N | 100.04 lbf
Coupling Nut Retention Force Method	IEC 61169-15:9.3.11
Insertion Force	27.98 N | 6.29 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	20.65 g | 0.046 lb

Regulatory Compliance/Certifications

Agency	Classification
CHINA-ROHS	Below maximum concentration value
REACH-SVHC	Compliant as per SVHC revision on www.andrew.com/ProductCompliance
ROHS	Compliant
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

PTS1-50-P

PTS1-50, HELIAX® Superflexible High Power, High Temperature 50 Ohm Plenum Rated Coaxial Cable, corrugated copper, 1/4 in, white FR-PVC jacket.

Product Classification

Product Type	Coaxial wireless cable
Product Brand	HELIAX®
Product Series	PTS1-50-P

General Specifications

Product Number	419929902/99
Flexibility	Superflexible
Jacket Color	White
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	1.88 mm | 0.074 in
Outer Conductor OD	6.35 mm | 0.25 in
Nominal Size	1/4 in

Electrical Specifications

3rd Order IMD	-107 dBm
3rd Order IMD Test Method	Two +43 dBm carriers
Cable Impedance	50 ohm ±1 ohm
Capacitance	80.7 pF/m | 24.597 pF/ft
dc Resistance, Inner Conductor	9.5 ohms/km | 2.896 ohms/kft
dc Resistance, Outer Conductor	6.562 ohms/km | 2 ohms/kft
dc Test Voltage	1600 V
Inductance	0.207 µH/m | 0.063 µH/ft
Insulation Resistance	100000 MOhms-km

PTS1-50-P

Jacket Spark Test Voltage (rms)	4000 V
Operating Frequency Band	1 – 20000 MHz
Peak Power	6.4 kW
Velocity	82 %

VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
680–960 MHz	1.222	20.01
1700–2200 MHz	1.222	20.01
2200–2700 MHz	1.222	20.01

Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)
0.5	0.265	0.081
1.0	0.368	0.112
2.0	0.719	0.219
10.0	1.914	0.584
20.0	2.719	0.829
30.0	3.32	1.012
50.0	4.325	1.318
100.0	6.189	1.886
108.0	6.443	1.964
150.0	7.636	2.328
174.0	8.315	2.534
200.0	8.894	2.711
300.0	11.118	3.389
400.0	12.891	3.929
450.0	13.735	4.187
500.0	14.566	4.44
512.0	14.757	4.498
600.0	16.097	4.907
700.0	17.547	5.349
800.0	18.866	5.75
824.0	19.176	5.845
894.0	20.029	6.105

960.0	20.86	6.358
1000.0	21.423	6.53
1250.0	24.265	7.396
1500.0	26.887	8.195
1700.0	28.925	8.817
1800.0	29.885	9.109
2000.0	31.73	9.671
2100.0	32.621	9.943
2200.0	33.529	10.22
2300.0	34.399	10.485
2500.0	36.067	10.993
2700.0	37.899	11.552
3000.0	40.102	12.223
3400.0	43.152	13.153
4000.0	47.429	14.456
5000.0	54.405	16.583
6000.0	60.464	18.43
8000.0	72.435	22.079
8800.0	76.701	23.379
10000.0	82.62	25.183
12000.0	92.938	28.328

Material Specifications

Dielectric Material	Foam FEP
Jacket Material	Fire retardant PVC
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	0.8 N-m | 7.081 in lb

Flat Plate Crush Strength	1.8 kg/mm	100.795 lb/in

Environmental Specifications

Operating Temperature	-40 °C to +75 °C (-40 °F to +167 °F)
Storage Temperature	-40 °C to +75 °C (-40 °F to +167 °F)
Attenuation, Ambient Temperature	68 °F	20 °C
Average Power, Ambient Temperature	104 °F	40 °C
Average Power, Inner Conductor Temperature	392 °F	200 °C
Fire Retardancy Test Method	NFPA 262/CMP	UL 910/CATVP

Packaging and Weights

Cable weight	0.1 kg/m	0.067 lb/ft

Regulatory Compliance/Certifications

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