

# 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

<b>Product Type</b>	Coaxial wireless cable
<b>Product Brand</b>	HELIAX®
<b>Product Series</b>	PTS1-50-P

## General Specifications

<b>Product Number</b>	419929902/99
<b>Flexibility</b>	Superflexible
<b>Jacket Color</b>	White
<b>Performance Note</b>	Attenuation values typical, guaranteed within 5%

## Dimensions

<b>Diameter Over Dielectric</b>	4.826 mm   0.19 in
<b>Diameter Over Jacket</b>	7.366 mm   0.29 in
<b>Inner Conductor OD</b>	1.88 mm   0.074 in
<b>Outer Conductor OD</b>	6.35 mm   0.25 in
<b>Nominal Size</b>	1/4 in

## Electrical Specifications

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

# PTS1-50-P

---

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

## VSWR/Return Loss

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

## Attenuation

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

# PTS1-50-P

---

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

<b>Dielectric Material</b>	Foam FEP
<b>Jacket Material</b>	Fire retardant PVC
<b>Inner Conductor Material</b>	Copper-clad aluminum wire
<b>Outer Conductor Material</b>	Corrugated copper

## Mechanical Specifications

<b>Minimum Bend Radius, multiple Bends</b>	25.4 mm   1 in
<b>Minimum Bend Radius, single Bend</b>	25.4 mm   1 in
<b>Number of Bends, minimum</b>	15
<b>Number of Bends, typical</b>	20
<b>Tensile Strength</b>	68 kg   149.914 lb
<b>Bending Moment</b>	0.8 N-m   7.081 in lb

# PTS1-50-P

---

**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

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