

# PTS1-HRL

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PTS1-50, HELIAX® Superflexible High Power, High Temperature Foam Coaxial Cable, corrugated copper, 1/4 in, brown TPC-ET 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>Flexibility</b>	Superflexible
<b>Jacket Color</b>	Brown
<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>Cable Impedance</b>	50 ohm $\pm$ 2 ohm
<b>Capacitance</b>	80.7 pF/m   24.597 pF/ft
<b>dc Resistance, Inner Conductor</b>	6.234 ohms/km   1.9 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

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<b>Insulation Resistance</b>	100000 MOhms-km
<b>Jacket Spark Test Voltage (rms)</b>	4000 V
<b>Operating Frequency Band</b>	100 – 12000 MHz
<b>Peak Power</b>	6.4 kW
<b>Velocity</b>	82 %

## Attenuation

<b>Frequency (MHz)</b>	<b>Attenuation (dB/100 m)</b>	<b>Attenuation (dB/100 ft)</b>
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

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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>	TPC-ET
<b>Inner Conductor Material</b>	Silver-plated copper 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>	51.02 kg   112.48 lb
<b>Bending Moment</b>	0.8 N-m   7.081 in lb
<b>Flat Plate Crush Strength</b>	1.8 kg/mm   100.795 lb/in

## Environmental Specifications

<b>Installation temperature</b>	-40 °C to +60 °C (-40 °F to +140 °F)
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<b>Operating Temperature</b>	-40 °C to +150 °C (-40 °F to +302 °F)
<b>Storage Temperature</b>	-40 °C to +85 °C (-40 °F to +185 °F)
<b>Attenuation, Ambient Temperature</b>	68 °F   20 °C
<b>Average Power, Ambient Temperature</b>	104 °F   40 °C
<b>Average Power, Inner Conductor Temperature</b>	392 °F   200 °C

## Packaging and Weights

<b>Cable weight</b>	0.1 kg/m   0.067 lb/ft
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## Regulatory Compliance/Certifications

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

