



## 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.**

### Construction Materials

Jacket Material	Fire retardant PVC
Outer Conductor Material	Corrugated copper
Dielectric Material	Foam FEP
Flexibility	Superflexible
Inner Conductor Material	Silver-plated copper wire
Jacket Color	White

### Dimensions

Nominal Size	1/4 in
Cable Weight	0.07 lb/ft   0.10 kg/m
Diameter Over Dielectric	4.826 mm   0.190 in
Diameter Over Jacket	7.366 mm   0.290 in
Inner Conductor OD	1.8796 mm   0.0740 in
Outer Conductor OD	6.350 mm   0.250 in

### Electrical Specifications

Cable Impedance	50 ohm $\pm$ 1 ohm
3rd Order IMD	-107 dBm
Capacitance	24.6 pF/ft   80.7 pF/m
dc Resistance, Inner Conductor	1.900 ohms/kft   6.234 ohms/km
dc Resistance, Outer Conductor	2.000 ohms/kft   6.562 ohms/km
dc Test Voltage	1600 V
Inductance	0.207 $\mu$ H/m   0.063 $\mu$ H/ft
Insulation Resistance	100000 Mohms•km
Jacket Spark Test Voltage (rms)	4000 V
Operating Frequency Band	1 – 20000 MHz
Peak Power	6.4 kW
Velocity	82%

### 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)

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## General Specifications

Brand HELIAX®

## Mechanical Specifications

Bending Moment	0.8 N-m   0.6 ft lb
Fire Retardancy Test Method	NFPA 262/CMP   UL 910/CATVP
Flat Plate Crush Strength	100.0 lb/in   1.8 kg/mm
Minimum Bend Radius, Multiple Bends	25.40 mm   1.00 in
Minimum Bend Radius, Single Bend	25.40 mm   1.00 in
Number of Bends, minimum	15
Number of Bends, typical	20
Tensile Strength	68 kg   150 lb

## Note

Performance Note Values typical, unless otherwise stated

## Standard Conditions

Attenuation, Ambient Temperature	20 °C   68 °F
Average Power, Ambient Temperature	40 °C   104 °F
Average Power, Inner Conductor Temperature	200 °C   392 °F

## Return Loss/VSWR

Frequency Band	VSWR	Return Loss (dB)
680–960 MHz	1.14	24.00
1700–2200 MHz	1.14	24.00
2200–2700 MHz	1.14	24.00

## Electrical Performance

Frequency	Attenuation (dB/100 m)	Attenuation (dB/100 ft)
0.5 MHz	0.27	0.08
1 MHz	0.37	0.11
2 MHz	0.72	0.22
10 MHz	1.91	0.58
20 MHz	2.72	0.83
30 MHz	3.32	1.01
50 MHz	4.33	1.32
100 MHz	6.19	1.89
108 MHz	6.44	1.96
150 MHz	7.64	2.33
174 MHz	8.32	2.53
200 MHz	8.89	2.71
300 MHz	11.12	3.39
400 MHz	12.89	3.93
450 MHz	13.74	4.19
500 MHz	14.57	4.44
512 MHz	14.76	4.50
600 MHz	16.10	4.91
700 MHz	17.55	5.35
800 MHz	18.87	5.75

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824 MHz	19.18	5.85
894 MHz	20.03	6.11
960 MHz	20.86	6.36
1000 MHz	21.42	6.53
1250 MHz	24.27	7.40
1500 MHz	26.89	8.20
1700 MHz	28.93	8.82
1800 MHz	29.89	9.11
2000 MHz	31.73	9.67
2100 MHz	32.62	9.94
2200 MHz	33.53	10.22
2300 MHz	34.40	10.49
2500 MHz	36.07	10.99
2700 MHz	37.90	11.55
3000 MHz	40.10	12.22
3400 MHz	43.15	13.15
4000 MHz	47.43	14.46
5000 MHz	54.41	16.58
6000 MHz	60.46	18.43
8000 MHz	72.44	22.08
8800 MHz	76.70	23.38
10000 MHz	82.62	25.18
12000 MHz	92.94	28.33

\* Values typical, guaranteed within 5%

## Regulatory Compliance/Certifications

### Agency

RoHS 2011/65/EU  
China RoHS SJ/T 11364-2006  
ISO 9001:2008

### Classification

Compliant  
Below Maximum Concentration Value (MCV)  
Designed, manufactured and/or distributed under this quality management system

