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

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

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

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

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