Product Specifications

COMMSCOPE®

POWERED BY ANDREW®

PTS1-HRL

PTS1-50, HELIAX® Superflexible High Power, High Temperature Foam Coaxial Cable, corrugated copper, 1/4 in, brown TPC-ET jacket

Construction Materials

Jacket Material	TPC-ET
Outer Conductor Material	Corrugated copper
Dielectric Material	Foam FEP
Flexibility	Superflexible
Inner Conductor Material	Silver-plated copper wire
Jacket Color	Brown

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 ±2 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 µH/m | 0.063 µH/ft
Insulation Resistance	100000 Mohms•km
Jacket Spark Test Voltage (rms)	4000 V
Operating Frequency Band	400 – 6000 MHz
Peak Power	6.4 kW
Pulse Reflection	1%
Velocity	82%

Environmental Specifications

Installation Temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Operating Temperature	-40 °C to +150 °C (-40 °F to +302 °F)

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Storage Temperature	-40 °C to +85 °C (-40 °F to +185 °F)

General Specifications

Brand	HELIAX®

Mechanical Specifications

Bending Moment	0.8 N-m | 0.6 ft lb
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	0.41	0.12
1 MHz	0.58	0.18
2 MHz	0.82	0.25
10 MHz	1.83	0.56
20 MHz	2.60	0.79
30 MHz	3.19	0.97
50 MHz	4.12	1.26
100 MHz	5.98	1.82
108 MHz	6.21	1.89
150 MHz	7.38	2.25
174 MHz	8.01	2.44
200 MHz	8.57	2.61
300 MHz	10.78	3.29
400 MHz	12.47	3.80
450 MHz	13.28	4.05
500 MHz	14.05	4.28
512 MHz	14.25	4.35
600 MHz	15.50	4.73
700 MHz	16.85	5.14
800 MHz	18.20	5.55

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824 MHz	18.55	5.66
894 MHz	19.30	5.88
960 MHz	20.12	6.13
1000 MHz	20.60	6.28
1250 MHz	23.31	7.11
1500 MHz	25.93	7.91
1700 MHz	27.80	8.48
1800 MHz	28.86	8.80
2000 MHz	30.51	9.30
2100 MHz	31.36	9.56
2200 MHz	32.25	9.83
2300 MHz	33.06	10.08
2500 MHz	34.65	10.56
2700 MHz	36.39	11.10
3000 MHz	38.51	11.74
3400 MHz	41.57	12.67
4000 MHz	45.47	13.86
5000 MHz	52.15	15.90
6000 MHz	57.88	17.65
8000 MHz	69.31	21.13
8800 MHz	73.34	22.36
10000 MHz	78.95	24.07
12000 MHz	88.78	27.07

** Values typical, guaranteed within 5%*

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Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
0.5	0.397	0.121	6.40
1	0.562	0.171	6.40
1.5	0.689	0.21	6.40
2	0.796	0.243	6.40
10	1.791	0.546	6.40
20	2.545	0.776	6.40
30	3.128	0.953	5.62
50	4.061	1.238	4.33
88	5.432	1.655	3.24
100	5.803	1.769	3.03
108	6.039	1.84	2.91
150	7.163	2.183	2.46
174	7.74	2.359	2.27
200	8.326	2.537	2.11
300	10.309	3.142	1.71
400	12.013	3.661	1.46
450	12.794	3.899	1.37
500	13.538	4.126	1.30
512	13.712	4.179	1.28
600	14.937	4.553	1.18
700	16.24	4.95	1.08
800	17.466	5.323	1.01
824	17.751	5.41	0.99
894	18.562	5.657	0.95
960	19.304	5.883	0.91
1000	19.743	6.017	0.89
1250	22.342	6.809	0.79
1500	24.741	7.541	0.71
1700	26.549	8.092	0.66
1800	27.422	8.358	0.64
2000	29.114	8.874	0.60
2100	29.936	9.124	0.59
2200	30.744	9.37	0.57
2300	31.538	9.612	0.56
2500	33.088	10.085	0.53
2700	34.594	10.544	0.51
3000	36.779	11.21	0.48
3400	39.574	12.062	0.44
3700	41.596	12.678	0.42
4000	43.561	13.277	0.40
5000	49.778	15.171	0.35
6000	55.594	16.944	0.32

** Values typical, guaranteed within 5%*

Regulatory Compliance/Certifications

Agency	Classification
RoHS 2011/65/EU	Compliant
China RoHS SJ/T 11364-2006	Below Maximum Concentration Value (MCV)
ISO 9001:2008	Designed, manufactured and/or distributed under this quality management system

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