

# HJ5RPV-50

HJ5-50, HELIAX® Plenum Rated Air Dielectric Coaxial Cable, corrugated copper, 7/8 in, off-white PVDF jacket



OBSOLETE

## Product Classification

Product Type	Air coaxial cable
Product Brand	HELIAX®
Product Series	HJ5-50

## General Specifications

Flexibility	Standard
Jacket Color	Off-white

## Dimensions

Diameter Over Jacket	27.432 mm   1.08 in
Inner Conductor OD	9.144 mm   0.36 in
Outer Conductor OD	25.4 mm   1 in
Nominal Size	7/8 in
Cable Volume	325.161 L/km   3.5 ft³/kft

## Electrical Specifications

Cable Impedance	50 ohm
Capacitance	72.835 pF/m   22.2 pF/ft
dc Resistance, Inner Conductor	0.82 ohms/km   0.25 ohms/kft
dc Resistance, Outer Conductor	0.656 ohms/km   0.2 ohms/kft
dc Test Voltage	6000 V
Inductance	0.187 µH/m   0.057 µH/ft

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<b>Insulation Resistance</b>	100000 MOhms-km
<b>Jacket Spark Test Voltage (rms)</b>	8000 V
<b>Operating Frequency Band</b>	1 – 5200 MHz
<b>Peak Power</b>	90 kW
<b>Power Attenuation</b>	2.781
<b>Velocity</b>	92 %

## Attenuation

<b>Frequency (MHz)</b>	<b>Attenuation (dB/100 m)</b>	<b>Attenuation (dB/100 ft)</b>	<b>Average Power (kW)</b>
<b>1.0</b>	0.116	0.035	78.44
<b>1.5</b>	0.143	0.043	63.98
<b>2.0</b>	0.165	0.05	55.36
<b>10.0</b>	0.372	0.113	24.56
<b>20.0</b>	0.529	0.161	17.26
<b>30.0</b>	0.65	0.198	14.03
<b>50.0</b>	0.846	0.258	10.79
<b>85.0</b>	1.113	0.339	8.19
<b>88.0</b>	1.134	0.346	8.05
<b>100.0</b>	1.212	0.369	7.53
<b>108.0</b>	1.262	0.385	7.23
<b>150.0</b>	1.499	0.457	6.09
<b>174.0</b>	1.622	0.494	5.63
<b>200.0</b>	1.746	0.532	5.23
<b>204.0</b>	1.764	0.538	5.17
<b>300.0</b>	2.168	0.661	4.21
<b>400.0</b>	2.532	0.772	3.6
<b>450.0</b>	2.7	0.823	3.38
<b>460.0</b>	2.732	0.833	3.34
<b>500.0</b>	2.86	0.872	3.19
<b>512.0</b>	2.897	0.883	3.15
<b>600.0</b>	3.161	0.963	2.89
<b>700.0</b>	3.443	1.049	2.65
<b>800.0</b>	3.708	1.13	2.46
<b>824.0</b>	3.77	1.149	2.42
<b>894.0</b>	3.946	1.203	2.31

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960.0	4.108	1.252	2.22
1000.0	4.203	1.281	2.17
1218.0	4.701	1.433	1.94
1250.0	4.771	1.454	1.91
1500.0	5.297	1.614	1.72
1700.0	5.695	1.736	1.6
1794.0	5.876	1.791	1.55
1800.0	5.888	1.794	1.55
2000.0	6.262	1.908	1.46
2100.0	6.444	1.964	1.42
2200.0	6.623	2.019	1.38
2300.0	6.799	2.072	1.34
2500.0	7.144	2.177	1.28
2700.0	7.479	2.28	1.22
3000.0	7.967	2.428	1.15
3400.0	8.594	2.619	1.06
3600.0	8.898	2.712	1.03
3700.0	9.048	2.758	1.01
3800.0	9.197	2.803	0.99
3900.0	9.344	2.848	0.98
4000.0	9.49	2.893	0.96
4100.0	9.636	2.937	0.95
4200.0	9.78	2.981	0.93
4300.0	9.923	3.024	0.92
4400.0	10.065	3.068	0.91
4500.0	10.206	3.111	0.89
4600.0	10.346	3.153	0.88
4700.0	10.485	3.196	0.87
4800.0	10.623	3.238	0.86
4900.0	10.76	3.28	0.85
5000.0	10.897	3.321	0.84

## Material Specifications

**Dielectric Material**

PE

**Jacket Material**

PVDF

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Inner Conductor Material	Copper tube
Outer Conductor Material	Corrugated copper
Mechanical Specifications	
Minimum Bend Radius, multiple Bends	254 mm   10 in
Number of Bends, minimum	15
Number of Bends, typical	20
Tensile Strength	363 kg   800.277 lb
Bending Moment	25 ft lb   33.895 N-m
Flat Plate Crush Strength	4.465 kg/mm   250 lb/in
Pressurization, maximum	0.207 N/mm <sup>2</sup>   30 psi

## Environmental Specifications

Installation temperature	-5 °C to +60 °C (+23 °F to +140 °F)
Operating Temperature	-20 °C to +85 °C (-4 °F to +185 °F)
Storage Temperature	-20 °C to +85 °C (-4 °F to +185 °F)
Attenuation, Ambient Temperature	68 °F   20 °C
Average Power, Ambient Temperature	104 °F   40 °C
Average Power, Inner Conductor Temperature	212 °F   100 °C
Fire Retardancy Test Method	NFPA 262/CATVP/CMP

## Packaging and Weights

Cable weight	0.804 kg/m   0.54 lb/ft
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## Regulatory Compliance/Certifications

Agency	Classification
c(ETL)us Certification	CATVP/CMP
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
UL/ETL Certification	CATVP/CMP

