

PPAIRA50V-E12X

1/2" Plenum Rated Air Dielectric Coaxial Cable

PROSE

- 1/2" Plenum Rated Coaxial Cable
- Corrugated aluminum outer conductor
- PVC jacket
- This product can be used in the plenum space of a building.



Photo for reference

Part Number

PPAIRA50V-E12W	1/2" Plenum rated coaxial cable, White PVC, Aluminum outer conductor
PPAIRA50V-E12R	1/2" Plenum rated coaxial cable, Red PVC, Aluminum outer conductor

Material

Inner conductor material	Copper-Clad Aluminium
Dielectric material	PE spline
Outer conductor material	Corrugated Aluminum
Jacket material	PVC Compound

Dimensions

Nominal size	1/2"
Inner conductor OD.	Ø 4.8 mm
Dielectric OD.	Ø 11.70 mm
Outer conductor OD.	Ø 13.85 mm
Jacket OD.	Ø 15.7 mm

Reference standard

Reference standard	IEC 61196-1
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Electrical Characteristics

Impedance	50 ± 2 Ω
Mutual Capacitance (reference)	75.45 pF/m
Velocity	88 %
Operating frequency	1 - 8800 MHz
Peak power rating	40 kW
Dielectric Strength (1 minute)	4000 V (No crack)

Jacket Spark Test Voltage	5 kV
Inductance	0.19 μ H/m
Insulation Resistance	≥ 10000 M Ω .km

Environmental Characteristics

Operating Temperature Range	-20°C to +80°C
Installation Temperature Range	-5°C to +60°C
Storage Temperature Range	-20°C to +80°C
RoHS	Compliant
Fire resistance test method	CMP,ETL,UL444,NFPA 262

Mechanical Characteristics

Min. Bending Radius	Single: 70 mm
	Repeated: 127 mm
Number of Bends, minimum	15
Max Tensile force	79 kg
Flat Plate Crush Resistance	1.429 kg/mm
Bending Moment	6.779 N-m
Approx. weight	200 kg/km

VSWR (Return Loss)

700 ~ 894 MHz	≤ 1.20 (-20.8dB)
806 ~ 960 MHz	≤ 1.20 (-20.8dB)
1700 ~ 2700 MHz	≤ 1.20 (-20.8dB)
3300 ~ 4200 MHz	≤ 1.25 (-19.1dB)
5700 ~ 5900 MHz	≤ 1.36 (-16.3dB)

Attenuation

Frequency (MHz)	Typical Attenuation (dB/100m)	Average Power (kW)
450	5.134	1.49
700	6.583	1.16
800	7.105	1.07
894	7.574	1.01
960	7.892	0.97
1000	8.081	0.94

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1500	10.256	0.74
1800	11.439	0.67
2000	12.192	0.63
2200	12.920	0.59
2500	13.975	0.55
2700	14.656	0.52
3000	15.649	0.49
3400	16.928	0.45
3800	18.164	0.42
4000	18.768	0.41
5000	21.671	0.35
6000	24.420	0.31

1. Typical attenuation at 20°C cable temperature. Maximum value + 5%.

2. Average power rating at 40°C (104°F) ambient temperature.

Marking on cable

XXXXM DDMMSSYYNNNNN 1/2AL impedance 50Ω coaxial plenum rated c(ETL)us 5031949 CMP 1X5AWG 75°C Communications Cable PROSE TECHNOLOGIES LLC
Remark1: Printing Interval: 1m, within ±0.5% accuracy.
Remark2: DDMMSSYYNNNNN means cable code.
Remark3: XXXXm means cable meter.

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