1/2" - Plenum Rated

FLAME RETARDANT

Cable type : *5129-PL*

Reference : *EC4-50-PL*

Cable with UV resistant, low smoke flame retardant jacket according to UL-910 / NFPA 262 CATVP rated (Plenum)

CHARACTERISTICS

Construction

• Inner conductor	
Material	**copper clad aluminium wire**
Diameter *(mm) (in)*	**4.8 (0.19)**
• Dielectric	
Material	**polyethylene**
Diameter *(mm) (in)*	**11.8 (0.464)**
• Outer conductor	
Material	**corrugated copper tube**
Diameter *(mm) (in)*	**13.8 (0.54)**
• Outer sheath	
Thickness *(mm) (in)*	**0.9 (0.035)**
Diameter *(mm) (in)*	**15.6 (0.61)**

Mechanical characteristics

• Minimum bending radius	
a) single bending *(cm) (in)*	**12.5 (5.0)**
b) 15 repeated bends *(cm)*	**12.5 (5.0)**
• Maximum pulling strength *(daN) (lb)*	**100 (225)**
• Recommended temperature range	
- Storage	**-15 to +85 °C (+5 to +185 °F)**
- Installation	**-15 to +60 °C (+5 to +140 °F)**
- Operation	**-15 to +85 °C (+5 to +185 °F)**
• Max. length per hoisting grip *(m) (ft)*	**70 (230)**
• Maximum hanger spacing *(m) (ft)*	**1 (3.3)**
• Flat plate crush res. *(kg/mm) (lb/in)*	**1.3 (75)**
• Bending moment *(Nm) (lb-ft)*	**6.0 (4.4)**
• Approximate weight *(kg/m) (lb/ft)*	**0.260 (0.176)**

Electrical characteristics

• Characteristic impedance *(Ω)*	**50 ± 1**
• Nominal capacity *(pF/m) (pF/ft)*	**76 (23.2)**
• Relative propagation velocity *(%)*	**88**
• Inductance *(µH/m) (µH/ft)*	**0.189 (0.058)**
• DC-resistance at 20°C (68°F)	
- inner conductor *(Ω/km) (Ω/1000ft)*	**1.48 (0.45)**
- outer conductor *(Ω/km) (Ω/1000ft)*	**1.85 (0.56)**
• RF peak voltage *(kV)*	**1.5**
• RF peak power *(kW)*	**22.5**
• Cut-off-frequency *(GHz)*	**6.1**
• Insulation resistance *(MΩ.km)*	**>> 5000**

• Attenuation[1] and power rating

Frequency	Attenuation at 20°C (68° F) [2]		Mean power rating [3]
(MHz)	*(dB/100m)*	*(dB/100ft)*	*(kW)*
10	0.68	0.207	18.9
20	0.92	0.280	13.2
30	1.11	0.338	10.73
80	1.79	0.546	6.40
100	2.00	0.610	5.68
150	2.46	0.750	4.57
200	2.86	0.872	3.90
300	3.55	1.08	3.12
400	4.16	1.27	2.65
450	4.44	1.35	2.48
500	4.71	1.44	2.33
600	5.22	1.59	2.10
700	5.70	1.74	1.92
800	6.16	1.88	1.77
894	6.57	2.00	1.66
960	6.85	2.09	1.59
1000	7.02	2.14	1.55
1500	8.95	2.73	1.21
1700	9.66	2.95	1.12
1800	10.0	3.05	1.08
1880	10.3	3.13	1.05
2000	10.7	3.26	1.01
2170	11.2	3.43	0.96
2200	11.3	3.46	0.96
2300	11.7	3.55	0.93
2400	12.0	3.65	0.90
2500	12.3	3.75	0.88
2700	12.9	3.94	0.84
3000	13.8	4.21	0.78
4000	16.7	5.08	0.65
6000	21.9	6.68	0.49

[1] The attenuation can be approximated by the formula:

$$\alpha(f[MHz]) = A \cdot \sqrt{f[MHz]} + B \cdot f[MHz] + C \quad (dB/100m)$$

A = 0.175
B = 0.001374
C = 0.11

[2] Nominal values

[3] Ambient temperature = 40°C (104°F); temperature of inner conductor = 100°C (212°F); VSWR = 1.0; no solar loading