EUPEN CABLE USA

5328A - Rev. 18 - 06.29.2021_USA

1 1/4"-A

STANDARD

Cable type : *5328 A*

Reference : *EC6-50-A*

Cable with standard UV resistant PE jacket, halogen free according to IEC 60754

CHARACTERISTICS

Construction

• **Inner conductor**	
Material	**smooth copper tube**
Diameter *(mm)*	**13.0**
• **Dielectric** Material	
Diameter *(mm)*	**gas-injected cellular polyethylene**
	33.5
• **Outer conductor**	
Material	**corrugated copper tube**
Diameter *(mm)*	**36**
• **Outer sheath**	
Thickness *(mm)*	**1.5**
Diameter *(mm)*	**39.0**

Mechanical characteristics

• **Minimum bending radius**	
a) single bending *(cm)*	**20**
b) 15 repeated bends *(cm)*	**35**
• **Maximum pulling strength** *(daN)*	**240**
• **Recommended temperature range**	
- Storage	**-70 to +85 °C (-94 to +185 °F)**
- Installation	**-40 to +60 °C (-40 to +140 °F)**
- Operation	**-55 to +85 °C (-67 to +185 °F)**
• **Max. length per hoisting grip** *(m)*	**70**
• **Maximum hanger spacing** *(m)*	**1.4**
• **Flat plate crush res.** *(kg/mm)*	**2.4**
• **Bending moment** *(Nm)*	**30**
• **Approximate weight** *(kg/km)*	**803 / 809**

Electrical characteristics

• Characteristic impedance *(Ω)*	**50 ± 1**
• Nominal capacity *(pF/m)*	**76**
• Relative propagation velocity *(%)*	**89**
• Inductance *(µH/m)*	**0.189**
• DC-resistance at 20°C (68°F)	
- inner conductor *(Ω/km)*	**0.95**
- outer conductor *(Ω/km)*	**0.69**
• RF peak voltage *(kV)*	**4.3**
• RF peak power *(kW)*	**184**
• Cut-off-frequency *(GHz)*	**3.7**
• Insulation resistance *(M Ω.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	0.25	0.08	37.13
20	0.36	0.11	26.12
30	0.44	0.13	21.24
80	0.73	0.22	12.84
100	0.81	0.25	11.44
150	1.01	0.31	9.26
200	1.17	0.36	7.96
300	1.45	0.44	6.42
400	1.69	0.52	5.51
450	1.80	0.55	5.17
500	1.91	0.58	4.88
600	2.10	0.64	4.42
700	2.29	0.70	4.07
800	2.46	0.75	3.78
894	2.62	0.80	3.56
960	2.72	0.83	3.42
1000	2.79	0.85	3.34
1500	3.50	1.07	2.66
1700	3.76	1.15	2.48
1800	3.88	1.18	2.40
1880	3.98	1.21	2.34
2000	4.12	1.26	2.26
2170	4.32	1.32	2.15
2200	4.35	1.33	2.14
2300	4.47	1.36	2.08
2400	4.58	1.40	2.03
2500	4.69	1.43	1.98
2700	4.91	1.50	1.90
3000	5.22	1.59	1.78
3400	5.62	1.71	1.66
3600	5.81	1.77	1.60

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

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

A = 0.0783

B =0.00031

[2] Nominal values

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