



1/4" - Hiflex

STANDARD

Cable type : **5042**

Reference : **EC1-50-HF**

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

CHARACTERISTICS

Construction

• Inner conductor	
Material	copper clad aluminium wire
Diameter (mm) (in)	1.9 (0.07)
• Dielectric	
Material	gas-injected cellular polyethylene
Diameter (mm) (in)	4.6 (0.18)
• Outer conductor	
Material	corrugated copper tube
Diameter (mm) (in)	6.4 (0.25)
• Outer sheath	
Thickness (mm) (in)	0.55 (0.02)
Diameter (mm) (in)	7.5 (0.3)

Mechanical characteristics

• Minimum bending radius	
a) single bending (cm) (in)	2.5 (1)
b) 15 repeated bends (cm) (in)	2.5 (1)
• Maximum pulling strength (daN) (lb)	
	30 (67)
• 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) (ft)	
	70 (230)
• Maximum hanger spacing (m) (ft)	
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• Flat plate crush res. (kg/mm) (lb/in)	
	1.8 (104)
• Bending moment (Nm) (lb-ft)	
	1.1 (0.8)
• Approximate weight (kg/km) (lb/ft)	
	83 (0.056)

Electrical characteristics

• Characteristic impedance (Ω)		50 $\pm$ 1
• Nominal capacity (pF/m) (pF/ft)		80 (24.4)
• Relative propagation velocity (%)		82
• Inductance (μH/m) (μH/ft)		0.203 (0.062)
• DC-resistance at 20°C (68°F)		
- inner conductor (Ω /km) (Ω /1000ft)		9.2 (2.8)
- outer conductor (Ω /km) (Ω /1000ft)		4.4 (1.34)
• RF peak voltage (kV)		0.6
• RF peak power (kW)		3.6
• Cut-off-frequency (GHz)		22.0
• Insulation resistance ($M\Omega \cdot km$)		>> 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	1.76	0.537
20	2.49	0.759
30	3.06	0.933
80	5.03	1.534
100	5.63	1.716
150	6.93	2.113
200	8.03	2.448
300	9.89	3.015
400	11.48	3.500
450	12.20	3.720
500	12.89	3.930
600	14.18	4.323
700	15.37	4.686
800	16.49	5.027
894	17.49	5.332
960	18.16	5.537
1000	18.56	5.659
1500	23.03	7.021
1700	24.63	7.509
1800	25.40	7.744
1880	26.00	7.927
2000	26.89	8.198
2170	28.10	8.567
2200	28.31	8.631
2300	29.00	8.841
2400	29.68	9.049
2500	30.35	9.253
2700	31.65	9.649
3000	33.53	10.223
4000	39.31	11.985
6000	49.36	15.049

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

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

A = 0.552
B = 0.0011

[2] Nominal values

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