



3/8" - Hiflex

STANDARD

Cable type : 5082

Reference : EC2-50-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)	2.64 (0.1)
• Dielectric	
Material	gas-injected cellular polyethylene
Diameter (mm) (in)	6.7 (0.26)
• Outer conductor	
Material	corrugated copper tube
Diameter (mm) (in)	9.1 (0.36)
• Outer sheath	
Thickness (mm) (in)	0.6 (0.02)
Diameter (mm) (in)	10.3 (0.41)

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)	
	45 (101)
• 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)	
	1.4 (1)
• Approximate weight (kg/km) (lb/ft)	
	115 (0.078)

Electrical characteristics

• Characteristic impedance (Ω)	50 ± 1
• Nominal capacity (pF/m) (pF/ft)	82 (25)
• Relative propagation velocity (%)	82
• Inductance (μ H/m) (μ H/ft)	0.203 (0.062)
• DC-resistance at 20°C (68°F)	
- inner conductor (Ω /km) (Ω /1000ft)	4.8 (1.46)
- outer conductor (Ω /km) (Ω /1000ft)	4.15 (1.27)
• RF peak voltage (kV)	0.9
• RF peak power (kW)	7.2
• Cut-off-frequency (GHz)	15.6
• Insulation resistance (M Ω .km)	>> 5000

• Attenuation^[1] and power rating

Frequency (MHz)	Attenuation at 20°C (68°F) ^[2]		Mean power rating ^[3] (kW)
	(dB/100m)	(dB/100ft)	
10	1.31	0.399	6.06
20	1.86	0.567	4.27
30	2.28	0.695	3.48
80	3.76	1.146	2.11
100	4.21	1.284	1.88
150	5.19	1.582	1.53
200	6.02	1.835	1.32
300	7.43	2.265	1.07
400	8.64	2.634	0.92
450	9.19	2.802	0.86
500	9.72	2.963	0.81
600	10.70	3.262	0.74
700	11.62	3.543	0.68
800	12.48	3.805	0.63
894	13.24	4.037	0.60
960	13.76	4.195	0.58
1000	14.07	4.290	0.56
1500	17.53	5.345	0.45
1700	18.77	5.723	0.42
1800	19.37	5.905	0.41
1880	19.85	6.052	0.40
2000	20.54	6.262	0.39
2170	21.49	6.552	0.37
2200	21.65	6.601	0.37
2300	22.19	6.765	0.36
2400	22.73	6.930	0.35
2500	23.25	7.088	0.34
2700	24.27	7.399	0.33
3000	25.8	7.85	0.31
4000	30.3	9.25	0.26
6000	38.4	11.70	0.21

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

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

$$A = 0.41$$

$$B = 0.0011$$

[2] Nominal values

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

