



1 5/8" -A

STANDARD

Cable type : 5438 A
Reference : EC7-50-A

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

CHARACTERISTICS

Construction

• Inner conductor	
Material	corrugated copper tube
Diameter (mm) (in)	17.7 (0.7)
• Dielectric	
Material	gas-injected cellular polyethylene
Diameter (mm) (in)	43 (1.69)
• Outer conductor	
Material	corrugated copper tube
Diameter (mm) (in)	46.6 (1.83)
• Outer sheath	
Thickness (mm) (in)	1.7 (0.07)
Diameter (mm) (in)	50.0 (1.97)

Mechanical characteristics

• Minimum bending radius	
a) single bending (cm) (in)	20 (7.9)
b) 15 repeated bends (cm) (in)	40 (15.7)
• Maximum pulling strength (daN) (lb)	
	250 (562)
• 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)	
	1.5 (4.9)
• Flat plate crush res. (kg/mm) (lb/in)	
	2.4 (138)
• Bending moment (Nm) (lb-ft)	
	38 (27.9)
• Approximate weight^[4] (kg/km) (lb/ft)	
	1019 (0.69) / 1131 (0.766)

[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 = 0.064
B = 0.000253

FLAME RETARDANT

Cable type : 5438 A-HLFR
Reference : EC7-50-A-FR

Cable with UV resistant, halogen free, low smoke,
flame retardant jacket according to IEC 60754,
IEC 60332-1, IEC 60332-3 cat. C and IEC 61034.
Reaction to fire according to EN 60332-1-2 E_{ca}.
Compliant to EN 50575.

Electrical characteristics

• Characteristic impedance (Ω)	50 ± 1
• Nominal capacity (pF/m) (pF/ft)	75 (22.9)
• Relative propagation velocity (%)	89
• Inductance ($\mu\text{H}/\text{m}$) ($\mu\text{H}/\text{ft}$)	0.187 (0.057)
• DC-resistance at 20°C (68°F)	
- inner conductor (Ω/km) ($\Omega/1000\text{ft}$)	1.44 (0.44)
- outer conductor (Ω/km) ($\Omega/1000\text{ft}$)	0.5 (0.15)
• RF peak voltage (kV)	5.5
• RF peak power (kW)	302
• Cut-off-frequency (GHz)	2.8
• 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	0.20	0.061	49.42
20	0.29	0.088	34.76
30	0.36	0.110	28.27
80	0.59	0.180	17.09
100	0.67	0.204	15.22
150	0.82	0.250	12.32
200	0.96	0.293	10.60
300	1.18	0.360	8.55
400	1.38	0.421	7.33
450	1.47	0.448	6.88
500	1.56	0.476	6.50
600	1.72	0.524	5.89
700	1.87	0.570	5.41
800	2.01	0.613	5.03
894	2.14	0.652	4.73
960	2.23	0.680	4.55
1000	2.28	0.695	4.45
1500	2.86	0.872	3.54
1700	3.07	0.936	3.30
1800	3.17	0.966	3.19
1880	3.25	0.991	3.12
2000	3.37	1.027	3.01
2170	3.53	1.076	2.87
2200	3.56	1.085	2.85
2300	3.65	1.113	2.77
2400	3.74	1.140	2.71
2500	3.83	1.168	2.64
2700	4.01	1.223	2.53
3000	-	-	-
4000	-	-	-
6000	-	-	-

[2] Nominal values

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

[4] Standard PE jacket / HLFR Jacket

