



1/2" - Hiflex

STANDARD

Cable type : 5092

Reference : EC4-50-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) | 3.55 (0.14) |
| • Dielectric | |
| Material | gas-injected cellular polyethylene |
| Diameter (mm) (in) | 9 (0.35) |
| • Outer conductor | |
| Material | corrugated copper tube |
| Diameter (mm) (in) | 12.1 (0.48) |
| • Outer sheath | |
| Thickness (mm) (in) | 0.7 (0.03) |
| Diameter (mm) (in) | 13.6 (0.54) |

Mechanical characteristics

| | |
|--|--------------------------------|
| • Minimum bending radius | |
| a) single bending (cm) (in) | 3 (1.2) |
| b) 15 repeated bends (cm) (in) | 3 (1.2) |
| • Maximum pulling strength (daN) (lb) | 68 (153) |
| • 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) | 0.5 (1.6) |
| • Flat plate crush res. (kg/mm) (lb/in) | 2.1 (121) |
| • Bending moment (Nm) (lb-ft) | 2 (1.5) |
| • Approximate weight (kg/km) (lb/ft) | 191 (0.129) |

Electrical characteristics

| | |
|---|---------------|
| • Characteristic impedance (Ω) | 50.3 ± 0.5 |
| • Nominal capacity (pF/m) (pF/ft) | 82 (25) |
| • Relative propagation velocity (%) | 82 |
| • Inductance (μ H/m) (μ H/ft) | 0.204 (0.062) |
| • DC-resistance at 20°C (68°F) | |
| - inner conductor (Ω /km) (Ω /1000ft) | 2.76 (0.84) |
| - outer conductor (Ω /km) (Ω /1000ft) | 3.5 (1.07) |
| • RF peak voltage (kV) | 1.1 |
| • RF peak power (kW) | 12.7 |
| • Cut-off-frequency (GHz) | 13.2 |
| • 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 | 1.01 | 0.308 | 9.45 |
| 20 | 1.43 | 0.436 | 6.66 |
| 30 | 1.76 | 0.537 | 5.43 |
| 80 | 2.89 | 0.881 | 3.30 |
| 100 | 3.24 | 0.988 | 2.94 |
| 150 | 3.98 | 1.213 | 2.39 |
| 200 | 4.62 | 1.409 | 2.06 |
| 300 | 5.69 | 1.735 | 1.67 |
| 400 | 6.61 | 2.015 | 1.44 |
| 450 | 7.03 | 2.143 | 1.36 |
| 500 | 7.43 | 2.265 | 1.28 |
| 600 | 8.17 | 2.491 | 1.17 |
| 700 | 8.86 | 2.701 | 1.08 |
| 800 | 9.51 | 2.899 | 1.00 |
| 894 | 10.09 | 3.076 | 0.95 |
| 960 | 10.47 | 3.192 | 0.91 |
| 1000 | 10.70 | 3.262 | 0.89 |
| 1500 | 13.30 | 4.055 | 0.72 |
| 1700 | 14.23 | 4.338 | 0.67 |
| 1800 | 14.67 | 4.473 | 0.65 |
| 1880 | 15.02 | 4.579 | 0.63 |
| 2000 | 15.54 | 4.738 | 0.61 |
| 2170 | 16.24 | 4.951 | 0.59 |
| 2200 | 16.36 | 4.988 | 0.58 |
| 2300 | 16.77 | 5.113 | 0.57 |
| 2400 | 17.16 | 5.232 | 0.56 |
| 2500 | 17.55 | 5.351 | 0.54 |
| 2700 | 18.31 | 5.582 | 0.52 |
| 3000 | 19.40 | 5.915 | 0.49 |
| 4000 | 22.77 | 6.942 | 0.42 |
| 6000 | 28.63 | 8.729 | 0.33 |

[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 = 0.317
B = 0.00068

[2] Nominal values

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