



STANDARD

5042

Cable type :

5042

Reference :

EC1-50-HF

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

FLAME RETARDANT

HLFR

Cable type :

5042-HLFR

Reference :

EC1-50-HF-FR

Cable with UV resistant, halogen free, low smoke, flame retardant jacket according to IEC 60754-2, IEC 60332-1-2, IEC 60332-3 Cat. C and IEC 61034-1+2

CHARACTERISTICS

Construction

- **Inner conductor**
 - Material copper clad aluminium wire
 - Diameter (mm) 1.9
- **Dielectric**
 - Material gas-injected cellular polyethylene
 - Diameter (mm) 4.6
- **Outer conductor**
 - Material corrugated copper tube
 - Diameter (mm) 6.4
- **Jacket**
 - Material black polyethylene
 - Thickness (mm) 0.55
 - Diameter (mm) 7.5

Mechanical

- **Minimum bending radius**
 - a) single bending (cm) 3
 - b) 15 repeated bends (cm) 3
- **Maximum pulling strength** (daN) 30
- **Recommended temperature range**
 - Storage -70 to +85°C
 - Installation -40 to +60°C
 - Operation -55 to +85°C
- **Maximum length per hoisting grip** (m) 70
- **Maximum hanger spacing** -
- **Flat plate crush resistance** (kg/mm) 0.9
- **Bending moment** (Nm) 1.1
- **Weight** (kg/km) 80

[1] a = 0.552

b = 0.0011

$\alpha(f) = a \cdot \sqrt{f} + b \cdot f$ [dB/100m]

Electrical

- **Characteristic impedance** (Ω) 50 \pm 1.5
- **Nominal capacity** (pF/m) 80
- **Relative propagation velocity** (%) 82
- **Inductance** (μ H/m) 0.200
- **DC-resistance at 20°C**
 - inner conductor (Ω /km) 9.2
 - outer conductor (Ω /km) 4.4
- **RF peak voltage** (kV) 0.6
- **RF peak power** (kW) 3.6
- **Cut-off-frequency** (GHz) 22
- **Insulation resistance** (M Ω .km) >>5000

Attenuation [1] and power rating

| Frequency (MHz) | Attenuation at 20°C(*) (dB/100m) | Mean power rating(**) (kW) |
|-----------------|----------------------------------|----------------------------|
| 10 | 1.76 | 3.93 |
| 20 | 2.49 | 2.77 |
| 30 | 3.06 | 2.26 |
| 80 | 5.03 | 1.37 |
| 100 | 5.63 | 1.23 |
| 150 | 6.93 | 1.00 |
| 200 | 8.03 | 0.86 |
| 300 | 9.89 | 0.70 |
| 400 | 11.48 | 0.60 |
| 450 | 12.20 | 0.57 |
| 500 | 12.89 | 0.54 |
| 600 | 14.18 | 0.49 |
| 700 | 15.37 | 0.45 |
| 800 | 16.49 | 0.42 |
| 894 | 17.49 | 0.39 |
| 960 | 18.16 | 0.38 |
| 1000 | 18.56 | 0.37 |
| 1500 | 23.03 | 0.30 |
| 1700 | 24.63 | 0.28 |
| 1800 | 25.40 | 0.27 |
| 1880 | 26.00 | 0.27 |
| 2000 | 26.89 | 0.26 |
| 2170 | 28.10 | 0.25 |
| 2200 | 28.31 | 0.24 |
| 2300 | 29.00 | 0.24 |
| 2400 | 29.68 | 0.23 |
| 2500 | 30.35 | 0.23 |
| 3000 | 33.53 | 0.21 |
| 4000 | 39.31 | 0.18 |
| 6000 | 49.36 | 0.14 |

(*) Nominal values

(**) Ambient temperature = 40°C; Temperature of inner conductor = 100°C; VSWR = 1.0; no solar loading