

Flexible RF cable RG_142_B/U

Description

RG: RG type RF cables

RG142, 50 Ohm, 6 GHz, 200°C, ø4.95 mm, FEP jacket



Technical Data

Construction

| | Material | Detail | Diameter |
|------------------|--------------------------------------|---------------|-----------------|
| Centre conductor | Steel, Copper+Silver plated | Wire | 0.95 mm |
| Dielectric | PTFE (Polytetrafluoroethylene) | | 2.95 mm |
| Outer conductor | Copper, Silver plated | Braid, 97% | 3.6 mm |
| Outer conductor | Copper, Silver plated | Braid, 94 % | 4.25 mm |
| Jacket | FEP (Fluorinated ethylene propylene) | RAL 8015 - br | 4.95 mm +/- 0.1 |

Print: HUBER+SUHNER RG 142 B/U 50 Ohm (PA no.)

Electrical Data

| | |
|--------------------------------|--|
| Impedance | 50 Ω +/- 2 |
| Operating Frequency | 6 GHz |
| Capacitance | 95 pF/m |
| Velocity of signal propagation | 69 % |
| Signal delay | 4.75 ns/m |
| Screening effectiveness | ≥ 85 dB (up to 6 GHz) |
| Operating voltage | ≤ 2.5 kV _{rms} (at sea level) |
| Test voltage | 5 kV _{rms} (50 Hz/1 min) |

Mechanical Data

| | |
|---------------------|-------------------|
| Weight | 6.4 kg/100 m |
| Min. bending radius | static 30 mm |
| | repeated 50 mm |

Environmental Data

| | |
|--------------------------|--------------------|
| Temperature range | -65 °C ... +200 °C |
| Installation temperature | -20 °C... +60 °C |
| Flame propagation test | IEC 60332-3, |
| Halogen free | No |
| 2011/65/EU (RoHS) | compliant |
| 2006/1907/EC (REACH) | compliant |

Additional Information

MIL reference: M17/60-RG142 (former reference: M17/158-00001)

Ordering Information

Order as RG_142_B/U

Remarks

(For details refer to the HUBER+SUHNER RF CABLES GENERAL CATALOGUE or contact your nearest HUBER+SUHNER partner)

Suitable Connectors

Cable group U9 3 mm / 50 Ohm

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Matrix typical Attenuation [formula: $(a \cdot f^{0.5} + b \cdot f)$] and maximum Power CW [formula: $(p/f^{0.5})$]

Coefficients:

a = 0.3956

b = 0.0645

f_{max} = 6

P at 1GHz = 407

| Frequency (GHz) | Nom. attenuation (dB / m) sea level 25° C ambient temperature | Nom. attenuation (dB / ft) sea level 25° C ambient temperature | Max. CW power (W) sea level 40° C ambient temperature |
|--------------------|---|--|---|
| 0.3 | 0.24 | 0.072 | 743 |
| 0.6 | 0.35 | 0.105 | 525 |
| 0.9 | 0.43 | 0.132 | 429 |
| 1.2 | 0.51 | 0.156 | 372 |
| 1.5 | 0.58 | 0.177 | 332 |
| 1.8 | 0.65 | 0.197 | 303 |
| 2.1 | 0.71 | 0.216 | 281 |
| 2.4 | 0.77 | 0.234 | 263 |
| 2.7 | 0.82 | 0.251 | 248 |
| 3.0 | 0.88 | 0.268 | 235 |
| 3.3 | 0.93 | 0.284 | 224 |
| 3.6 | 0.98 | 0.300 | 215 |
| 3.9 | 1.03 | 0.315 | 206 |
| 4.2 | 1.08 | 0.330 | 199 |
| 4.5 | 1.13 | 0.344 | 192 |
| 4.8 | 1.18 | 0.359 | 186 |
| 5.1 | 1.22 | 0.373 | 180 |
| 5.4 | 1.27 | 0.386 | 175 |
| 5.7 | 1.31 | 0.400 | 170 |
| 6.0 | 1.36 | 0.413 | 166 |