

Flexible RF cable

RG_178_B/U Item: 22510043

Description

RG: RG type RF cables

RG178, 50 Ohm, 3 GHz, 200°C, ø1.8 mm, FEP jacket



Technical Data

Construction

| | Material | Detail | Diameter |
|------------------|--------------------------------------|---------------|----------------|
| Centre conductor | Steel, Copper+Silver plated | Strand-07 | 0.31 mm |
| Dielectric | PTFE (Polytetrafluoroethylene) | | 0.83 mm |
| Outer conductor | Copper, Silver plated | Braid, 95% | 1.33 mm |
| Jacket | FEP (Fluorinated ethylene propylene) | RAL 8015 - br | 1.8 mm +/- 0.1 |

Print: HUBER+SUHNER RG 178 B/U 50 Ohm (production order number)

Electrical Data

| | |
|--------------------------------|--|
| Impedance | 50 Ω +/- 2 |
| Operating Frequency | 3 GHz |
| Capacitance | 97 pF/m |
| Velocity of signal propagation | 69 % |
| Signal delay | 4.84 ns/m |
| Screening effectiveness | ≥ 40 dB (up to 1 GHz) |
| Operating voltage | ≤ 0.5 kV _{rms} (at sea level) |
| Test voltage | 1 kV _{rms} (50 Hz/1 min) |

Mechanical Data

| | | |
|---------------------|---------|---------------|
| Weight | | 0.84 kg/100 m |
| Min. bending radius | static | 10 mm |
| | dynamic | 18 mm |
| | | 27 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 - including 2015/863 and 2017/2102) | compliant |
| 1907/2006/EC (REACH) | compliant |

Additional Information

MIL reference: M17/93-RG178 and M17/93-00001

Remarks

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

Suitable Connectors

Cable group U1 1 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 = 1.414

b = 0.173

f_{max} = 3

P at 1GHz = 52

| 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 |
|--------------------|---|--|---|
| 0,15 | 0,57 | 0,175 | 134 |
| 0,3 | 0,83 | 0,252 | 95 |
| 0,45 | 1,03 | 0,313 | 78 |
| 0,6 | 1,2 | 0,365 | 67 |
| 0,75 | 1,35 | 0,413 | 60 |
| 0,9 | 1,5 | 0,456 | 55 |
| 1,05 | 1,63 | 0,497 | 51 |
| 1,2 | 1,76 | 0,535 | 47 |
| 1,35 | 1,88 | 0,572 | 45 |
| 1,5 | 1,99 | 0,607 | 42 |
| 1,65 | 2,1 | 0,641 | 40 |
| 1,8 | 2,21 | 0,673 | 39 |
| 1,95 | 2,31 | 0,705 | 37 |
| 2,1 | 2,41 | 0,735 | 36 |
| 2,25 | 2,51 | 0,765 | 35 |
| 2,4 | 2,61 | 0,794 | 34 |
| 2,55 | 2,7 | 0,823 | 33 |
| 2,7 | 2,79 | 0,851 | 32 |
| 2,85 | 2,88 | 0,878 | 31 |
| 3,0 | 2,97 | 0,905 | 30 |