

## Flexible RF cable

RG\_174\_A/U Item: 22511579

## Description

RG: RG type RF cables

RG174, 50 Ohm, 1 GHz, 85°C, ø2.8 mm, PVC jacket



## Technical Data

## Construction

|                  | Material               | Detail        | Diameter        |
|------------------|------------------------|---------------|-----------------|
| Centre conductor | Steel, Copper plated   | Strand-07     | 0.48 mm         |
| Dielectric       | PE (Polyethylene)      |               | 1.48 mm         |
| Outer conductor  | Copper, Tin plated     | Braid, 87%    | 2 mm            |
| Jacket           | PVC II (low migration) | RAL 9005 - bk | 2.8 mm +/- 0.12 |

Print: HUBER+SUHNER RG 174 A/U 50 Ohm (production order number)

## Electrical Data

|                                |                                        |
|--------------------------------|----------------------------------------|
| Impedance                      | 50 Ω +/- 2                             |
| Operating Frequency            | 1 GHz                                  |
| Capacitance                    | 101 pF/m                               |
| Velocity of signal propagation | 66 %                                   |
| Signal delay                   | 5.03 ns/m                              |
| Screening effectiveness        | ≥ 40 dB (up to 1 GHz)                  |
| Operating voltage              | ≤ 1.5 kV <sub>rms</sub> (at sea level) |
| Test voltage                   | 3 kV <sub>rms</sub> (50 Hz/1 min)      |

## Mechanical Data

|                     |         |              |
|---------------------|---------|--------------|
| Weight              |         | 1.2 kg/100 m |
| Min. bending radius | static  | 15 mm        |
|                     |         | 28 mm        |
|                     | dynamic | 55 mm        |

## Environmental Data

|                                                      |                   |
|------------------------------------------------------|-------------------|
| Temperature range                                    | -25 °C ... +85 °C |
| Installation temperature                             | -20 °C... +60 °C  |
| Halogen free                                         | No                |
| 2011/65/EU (RoHS - including 2015/863 and 2017/2102) | compliant         |
| 1907/2006/EC (REACH)                                 | compliant         |

## Additional Information

MIL reference: M17/196-00001 (former reference: M17/119-RG174)

## Remarks

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

## Suitable Connectors

|             |                  |
|-------------|------------------|
| Cable group | U2 2 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 = 0.888

b = 0.034

 $f_{\max} = 1$ 

P at 1GHz = 37

| Frequency | Nom. attenuation                          | Nom. attenuation                          | Max. CW power                             |
|-----------|-------------------------------------------|-------------------------------------------|-------------------------------------------|
| (GHz)     | (dB / m)                                  | (dB / ft)                                 | (W)                                       |
|           | sea level 25° C<br>ambient<br>temperature | sea level 25° C<br>ambient<br>temperature | sea level 40° C<br>ambient<br>temperature |
| 0,05      | 0,2                                       | 0,061                                     | 165                                       |
| 0,1       | 0,28                                      | 0,087                                     | 117                                       |
| 0,15      | 0,35                                      | 0,106                                     | 96                                        |
| 0,2       | 0,4                                       | 0,123                                     | 83                                        |
| 0,25      | 0,45                                      | 0,138                                     | 74                                        |
| 0,3       | 0,5                                       | 0,151                                     | 68                                        |
| 0,35      | 0,54                                      | 0,164                                     | 63                                        |
| 0,4       | 0,58                                      | 0,175                                     | 59                                        |
| 0,45      | 0,61                                      | 0,186                                     | 55                                        |
| 0,5       | 0,64                                      | 0,197                                     | 52                                        |
| 0,55      | 0,68                                      | 0,206                                     | 50                                        |
| 0,6       | 0,71                                      | 0,216                                     | 48                                        |
| 0,65      | 0,74                                      | 0,225                                     | 46                                        |
| 0,7       | 0,77                                      | 0,234                                     | 44                                        |
| 0,75      | 0,79                                      | 0,242                                     | 43                                        |
| 0,8       | 0,82                                      | 0,250                                     | 41                                        |
| 0,85      | 0,85                                      | 0,258                                     | 40                                        |
| 0,9       | 0,87                                      | 0,266                                     | 39                                        |
| 0,95      | 0,9                                       | 0,274                                     | 38                                        |
| 1,0       | 0,92                                      | 0,281                                     | 37                                        |