

**RG58 alternative, 50 Ohm, 1 GHz, 85°C, Ø4.95 mm, PUR jacket**

G\_03212-01

**Properties**

- Custom version of RG\_58
- PUR jacket



| Construction     |                    |                                |                    |
|------------------|--------------------|--------------------------------|--------------------|
| Component        | Material           | Detail                         | Diameter           |
| Centre conductor | Copper, Tin plated | Strand-19, 95 %, RAL 9005 - bk | 0.902 mm - 0.15 mm |
| Dielectric       | PE (Polyethylene)  |                                | 2.95 mm            |
| Outer conductor  | Copper, Tin plated | Braid, 95%                     | 3.6 mm             |
| Jacket           | PUR (Polyurethane) | RAL 9005 - bk                  | 4.95 mm +/- 0.1 mm |

| Electrical data                  |                                       |
|----------------------------------|---------------------------------------|
| Impedance                        | 50 Ω +/- 2Ω                           |
| Operating frequency              | ≤ 1 GHz                               |
| Capacitance                      | 101 pF/m                              |
| Velocity of signal propagation   | 66 %                                  |
| Signal delay                     | 5.03 ns/m                             |
| Screening effectiveness          | 40 dB at frequency 0.001 GHz ... 1GHz |
| Insulation resistance            | 100000000 MΩ*m                        |
| Operating Voltage (at sea level) | ≤ 2.5 kVrms                           |
| Test voltage (50 Hz/1 min)       | ≤ 5 kVrms                             |

| Mechanical data         |                |
|-------------------------|----------------|
| Weight                  | approx. 36 g/m |
| Static bending radius   | ≥ 25 mm        |
| Repeated bending radius | 50 mm          |

| Environmental data       |                                            |
|--------------------------|--------------------------------------------|
| Operation temperature    | -40 °C ... 85 °C                           |
| Installation temperature | -20 °C ... 60 °C                           |
| Fire characteristics     | free of halogenes, acc. standard IEC 60754 |

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| Suitable connectors |    |
|---------------------|----|
| Cable group         | U7 |

| Ordering information |                  |                            |
|----------------------|------------------|----------------------------|
| Item number          | Item description | Available as assembly only |
| 22610095             | G_03212-01       | No                         |

| Power Matrix                                                                                                                  |                                    |                                    |                                    |
|-------------------------------------------------------------------------------------------------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| Calculation: typical Attenuation [ formula: $(a \cdot f^{0.5} + b \cdot f)$ ] and maximum Power CW [ formula: $(p/f^{0.5})$ ] |                                    |                                    |                                    |
| a coefficient typical =                                                                                                       | <b>0.4629</b>                      | b coefficient typical =            | <b>0.1012</b>                      |
| fmax =                                                                                                                        | <b>1</b>                           | P at 1 GHz =                       | <b>110</b>                         |
| Frequency<br>GHz                                                                                                              | Nom. attenuation<br>(dB/m)         | Nom. attenuation<br>(dB/ft)        | CW power<br>(W)                    |
|                                                                                                                               | sea level 25°C ambient temperature | sea level 25°C ambient temperature | sea level 40°C ambient temperature |
| 0.10                                                                                                                          | 0.157                              | 0.048                              | 348                                |
| 0.20                                                                                                                          | 0.227                              | 0.069                              | 246                                |
| 0.30                                                                                                                          | 0.284                              | 0.087                              | 201                                |
| 0.40                                                                                                                          | 0.333                              | 0.102                              | 174                                |
| 0.60                                                                                                                          | 0.419                              | 0.128                              | 142                                |
| 0.80                                                                                                                          | 0.495                              | 0.151                              | 123                                |
| 1.00                                                                                                                          | 0.564                              | 0.172                              | 110                                |

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