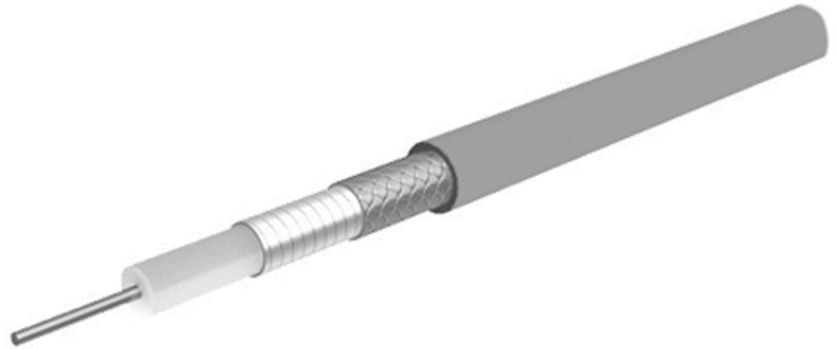


# Flexible (RG402) 50 Ohm, 33 GHz, 165°C, Ø4.14 mm, FEP jacket

## MULTIFLEX\_141

### Properties

- Flexible alternative to semi-rigid cables
- Wide temperature range
- Suitable for use in applications up to 33 GHz



| Construction     |                                      |                    |                    |
|------------------|--------------------------------------|--------------------|--------------------|
| Component        | Material                             | Detail             | Diameter           |
| Centre conductor | Copper, Silver plated                | Wire               | 0.92 mm            |
| Dielectric       | PTFE (Polytetrafluoroethylene)       |                    | 2.93 mm            |
| Outer conductor  | Copper, Silver plated                | Wrapped foil, 100% | 3.21 mm            |
| Outer conductor  | Multi-end: Copper - Tinned           | Braid, 83%         | 3.53 mm            |
| Jacket           | FEP (Fluorinated ethylene propylene) | RAL 5015 - bl      | 4.14 mm +/- 0.1 mm |

| Electrical data                  |                                        |
|----------------------------------|----------------------------------------|
| Impedance                        | 50 Ω +/-2Ω                             |
| Operating frequency              | ≤ 33 GHz                               |
| Capacitance                      | 95 pF/m                                |
| Velocity of signal propagation   | 70.6 %                                 |
| Signal delay                     | 4.7 ns/m                               |
| Screening effectiveness          | ≥ 90 dB at frequency 0.1 GHz ... 18GHz |
| Insulation resistance            | 100000000 MΩ*m                         |
| Operating Voltage (at sea level) | ≤ 1.9 kVrms                            |
| Test voltage (50 Hz/1 min)       | ≤ 3.8 kVrms                            |

| Mechanical data        |                |
|------------------------|----------------|
| Weight                 | approx. 45 g/m |
| Static bending radius  | ≥ 10 mm        |
| Dynamic bending radius | ≥ 40 mm        |

| Environmental data         |                                      |
|----------------------------|--------------------------------------|
| Operation temperature      | -65 °C ... 165 °C                    |
| Installation temperature   | -20 °C ... 60 °C                     |
| Flame propagation standard | IEC 60332-1<br>UL 1581 § 1080 (VW-1) |

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| Environmental data                                                                                        |                                    |                                    |                                    |
|-----------------------------------------------------------------------------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| Fire characteristics                                                                                      |                                    | contains halogene                  |                                    |
|                                                                                                           |                                    |                                    |                                    |
| Material compliance                                                                                       |                                    |                                    |                                    |
| Item number                                                                                               | Directive / Regulation             | Rating                             | Exemptions / Details               |
| 22511964                                                                                                  | RoHS 2011/65/EU and (EU) 2015/863  | Compliant without exemption        |                                    |
|                                                                                                           | REACH 1907/2006 Article 33 SVHC    | Free of SVHC >0,1%                 |                                    |
|                                                                                                           |                                    |                                    |                                    |
| Suitable connectors                                                                                       |                                    |                                    |                                    |
| Cable group                                                                                               |                                    | Y17                                |                                    |
|                                                                                                           |                                    |                                    |                                    |
| Ordering information                                                                                      |                                    |                                    |                                    |
| Item number                                                                                               | Item description                   |                                    | Available as assembly only         |
| 22511964                                                                                                  | MULTIFLEX_141                      |                                    | No                                 |
|                                                                                                           |                                    |                                    |                                    |
| Power Matrix                                                                                              |                                    |                                    |                                    |
| Calculation: typical Attenuation [ formula: (a*f^0.5 + b*f) ] and maximum Power CW [ formula: (p/f^0.5) ] |                                    |                                    |                                    |
| a coefficient typical =                                                                                   | 0.3732                             | b coefficient typical =            | 0.0279                             |
| fmax =                                                                                                    | 33                                 | P at 1 GHz =                       | 281                                |
|                                                                                                           |                                    |                                    |                                    |
| Frequency                                                                                                 | Nom. attenuation                   | Nom. attenuation                   | CW power                           |
| GHz                                                                                                       | (dB/m)                             | (dB/ft)                            | (W)                                |
|                                                                                                           | sea level 25°C ambient temperature | sea level 25°C ambient temperature | sea level 40°C ambient temperature |
| 0.20                                                                                                      | 0.172                              | 0.053                              | 628                                |
| 0.40                                                                                                      | 0.247                              | 0.075                              | 444                                |
| 0.60                                                                                                      | 0.306                              | 0.093                              | 363                                |
| 0.80                                                                                                      | 0.356                              | 0.109                              | 314                                |
| 1.00                                                                                                      | 0.401                              | 0.122                              | 281                                |
| 1.20                                                                                                      | 0.442                              | 0.135                              | 257                                |
| 1.40                                                                                                      | 0.481                              | 0.146                              | 237                                |
| 1.60                                                                                                      | 0.517                              | 0.157                              | 222                                |
| 1.80                                                                                                      | 0.551                              | 0.168                              | 209                                |
| 2.00                                                                                                      | 0.584                              | 0.178                              | 199                                |
| 4.00                                                                                                      | 0.858                              | 0.262                              | 140                                |
| 6.00                                                                                                      | 1.082                              | 0.330                              | 115                                |
| 8.00                                                                                                      | 1.279                              | 0.390                              | 99                                 |
| 10.00                                                                                                     | 1.459                              | 0.445                              | 89                                 |
| 20.00                                                                                                     | 2.227                              | 0.679                              | 63                                 |
| 30.00                                                                                                     | 2.881                              | 0.878                              | 51                                 |
| 33.00                                                                                                     | 3.065                              | 0.934                              | 49                                 |

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