DATA SHEET

# Hand formable (RG402) 50Ohm, 33GHz, 165°C, ø4.1mm FEP jacket

SUCOFORM_141_CU_FEP

## Properties

- Hand-formable alternative to semi-rigid cables
- Small bend radius allows for space saving routing and packaging
- Performance comparable to semi-rigid cables
- Non-magnetic
- FEP jacket



| Construction | | | |
|---|---|---|---|
| **Component** | **Material** | **Detail** | **Diameter** |
| Centre conductor | Copper, Silver plated | Wire | 0.95 mm |
| Dielectric | PTFE (Polytetrafluoroethylene) | | 2.95 mm |
| Outer conductor | Copper, Tin plated | Tin soaked braid, 100% | 3.58 mm |
| Jacket | FEP (Fluorinated ethylene propylene) | RAL 3020 - rd | 4.1 mm +/- 0.1 mm |

| Electrical data | |
|---|---|
| Impedance | 50 Ω +/-2Ω |
| Operating frequency | ≤ 33 GHz |
| Capacitance | 92 pF/m |
| Velocity of signal propagation | 71 % |
| Signal delay | 4.7 ns/m |
| Screening effectiveness | 100 dB at frequency 1 GHz ... 18GHz |
| Insulation resistance | 100000000 MΩ*m |
| Inner conductor resistance | 25 Ω/km |
| Outer conductor resistance | 18 Ω/km |
| Operating Voltage (at sea level) | ≤ 1.9 kVrms |
| Test voltage (50 Hz/1 min) | ≤ 5 kVrms |

| Mechanical data | |
|---|---|
| Weight | approx. 47 g/m |
| Static bending radius | ≥ 8 mm |
| Repeated bending radius | 40 mm (bendings, up to 50) |

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| Environmental data | |
|---|---|
| Operation temperature | -65 °C ... 165 °C |
| Installation temperature | -20 °C ... 60 °C |
| Flame propagation standard | IEC 60332-1 |
| | UL 1581 § 1080 (VW-1) |
| Fire characteristics | contains halogene |

| Material compliance | | | |
|---|---|---|---|
| Item number | Directive / Regulation | Rating | Exemptions / Details |
| 22512256 | 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 | Y12 |

| Ordering information | | |
|---|---|---|
| Item number | Item description | Available as assembly only |
| 22512256 | SUCOFORM_141_CU_FEP | 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 = | **0.355** | b coefficient typical = | **0.04** |
| fmax = | **33** | P at 1 GHz = | **560** |
| | | | |
| **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 | 0.167 | 0.051 | 1252 |
| 0.40 | 0.241 | 0.073 | 885 |
| 0.60 | 0.299 | 0.091 | 723 |
| 0.80 | 0.350 | 0.107 | 626 |
| 1.00 | 0.395 | 0.120 | 560 |
| 1.20 | 0.437 | 0.133 | 511 |
| 1.40 | 0.476 | 0.145 | 473 |
| 1.60 | 0.513 | 0.156 | 443 |
| 1.80 | 0.548 | 0.167 | 417 |
| 2.00 | 0.582 | 0.177 | 396 |
| 4.00 | 0.870 | 0.265 | 280 |
| 6.00 | 1.110 | 0.338 | 229 |
| 8.00 | 1.324 | 0.404 | 198 |
| 10.00 | 1.523 | 0.464 | 177 |
| 15.00 | 1.975 | 0.602 | 145 |
| 20.00 | 2.388 | 0.728 | 125 |
| 25.00 | 2.775 | 0.846 | 112 |
| 30.00 | 3.144 | 0.958 | 102 |
| 33.00 | 3.359 | 1.024 | 97 |

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