

## Formable microwave cable

**SUCOFORM\_141\_FEP**    Item: 22511944

## Description

Sucoform: Formstable, hand-formable alternatives to semi-rigid microwave cables

RG402 dimension, 50 Ohm, 33 GHz, 165°C, Ø4.1 mm, FEP jacket



## Technical Data

### Construction

|                  | Material                             | Detail                 | Diameter       |
|------------------|--------------------------------------|------------------------|----------------|
| Centre conductor | Steel, Copper+Silver plated          | Wire                   | 0.94 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 3027 - rd          | 4.1 mm +/- 0.1 |

Print: HUBER+SUHNER SUCOFORM 141 FEP 50 Ohm (PA no.)

### Electrical Data

|                                |                                        |
|--------------------------------|----------------------------------------|
| Impedance                      | 50 Ω +/- 2                             |
| Operating Frequency            | 33 GHz                                 |
| Capacitance                    | 92 pF/m                                |
| Velocity of signal propagation | 71 %                                   |
| Signal delay                   | 4.7 ns/m                               |
| Screening effectiveness        | ≥ 100 dB (up to 18 GHz)                |
| Operating voltage              | ≤ 1.9 kV <sub>rms</sub> (at sea level) |
| Test voltage                   | 5 kV <sub>rms</sub> (50 Hz/1 min)      |

### Mechanical Data

|                     |                                        |
|---------------------|----------------------------------------|
| Weight              | 4.7 kg/100 m                           |
| Min. bending radius | static<br>repeated (for ≤ 50 bendings) |
|                     | 8 mm<br>40 mm                          |

### Environmental Data

|                                                      |                                    |
|------------------------------------------------------|------------------------------------|
| Temperature range                                    | -65 °C ... +165 °C                 |
| Installation temperature                             | -20 °C... +60 °C                   |
| Flame propagation test                               | IEC 60332-1, UL 1581 § 1080 (VW-1) |
| Halogen free                                         | No                                 |
| 2011/65/EU (RoHS - including 2015/863 and 2017/2102) | compliant                          |
| 1907/2006/EC (REACH)                                 | compliant                          |
| 2000/53/EC (ELV)                                     | compliant                          |
| 2012/19/EU (WEEE)                                    | no special marking needed          |

## Additional Information

### Remarks

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

### Suitable Connectors

|             |                   |
|-------------|-------------------|
| Cable group | Y12 3 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 = 0.355

b = 0.04

f<sub>max</sub> = 33

P at 1GHz = 560

| 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 |
| 1,65      | 0,52                                      | 0,159                                     | 436                                       |
| 3,3       | 0,78                                      | 0,237                                     | 308                                       |
| 4,95      | 0,99                                      | 0,301                                     | 252                                       |
| 6,6       | 1,18                                      | 0,358                                     | 218                                       |
| 8,25      | 1,35                                      | 0,411                                     | 195                                       |
| 9,9       | 1,51                                      | 0,461                                     | 178                                       |
| 11,55     | 1,67                                      | 0,509                                     | 165                                       |
| 13,2      | 1,82                                      | 0,554                                     | 154                                       |
| 14,85     | 1,96                                      | 0,598                                     | 145                                       |
| 16,5      | 2,1                                       | 0,641                                     | 138                                       |
| 18,15     | 2,24                                      | 0,682                                     | 131                                       |
| 19,8      | 2,37                                      | 0,723                                     | 126                                       |
| 21,45     | 2,5                                       | 0,763                                     | 121                                       |
| 23,1      | 2,63                                      | 0,802                                     | 117                                       |
| 24,75     | 2,76                                      | 0,840                                     | 113                                       |
| 26,4      | 2,88                                      | 0,878                                     | 109                                       |
| 28,05     | 3,0                                       | 0,915                                     | 106                                       |
| 29,7      | 3,12                                      | 0,952                                     | 103                                       |
| 31,35     | 3,24                                      | 0,988                                     | 100                                       |
| 33,0      | 3,36                                      | 1,024                                     | 97                                        |

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