

# HUBER+SUHNER® DATA SHEET

## Coaxial Cable: SUCOFLEX\_103



### Description

SUCOFLEX 100, the flexible, high performance microwave cable

### Technical Data

#### Construction

|                  | Material                             | Detail              | Diameter |    |
|------------------|--------------------------------------|---------------------|----------|----|
| Centre conductor | Copper, Silver plated                | Wire                |          |    |
| Dielectric       | PTFE (Polytetrafluoroethylene)       |                     |          |    |
| Outer conductor  | Copper, Silver plated                | wrapped Foil, 100 % |          |    |
| Outer conductor  | Copper, Silver plated                | Braid               |          |    |
| Jacket           | FEP (Fluorinated ethylene propylene) | RAL 5000 - bl       | 4.6      | mm |

#### Electrical Data

|                                |  |       |                                  |
|--------------------------------|--|-------|----------------------------------|
| Impedance                      |  | 50    | Ω                                |
| Max. operating frequency       |  | 33    | GHz                              |
| Capacitance                    |  | 87    | pF/m                             |
| Velocity of signal propagation |  | 77    | %                                |
| Signal delay                   |  | 4.3   | ns/m                             |
| Insulation resistance          |  | ≥ 1 x | 10 <sup>8</sup> MΩm              |
| Min. screening effectiveness   |  | > 90  | dB (up to 18 GHz)                |
| Max. operating voltage         |  | 2     | kV <sub>rms</sub> (at sea level) |

#### Mechanical Data

|                     |         |     |          |
|---------------------|---------|-----|----------|
| Weight              |         | 5.3 | kg/100 m |
| Min. bending radius | static  | 13  | mm       |
|                     | dynamic | 22  | mm       |

#### Environmental Data

|                   |                       |
|-------------------|-----------------------|
| Temperature range | -55 °C... + 165 °C    |
| Flammability      | MIL-T-87104 § 4.6.4.8 |
| 2002/95/EC (RoHS) | compliant             |

#### Ordering Information

Order as SUCOFLEX\_103 (available only as assembly)

#### Additional Information

##### Remarks

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

#### Cable group

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Rev.: F

**Matrix**                      **Attenuation** [ formula:  $(a \cdot f^{0.5} + b \cdot f)$  ] **and Power CW** [ formula:  $(p \cdot f^{0.5})$  ]

Coefficients:

|    |                  |    |   |                     |   |                           |   |
|----|------------------|----|---|---------------------|---|---------------------------|---|
| a= | 0.2836           | b= | 0.0071                                    | f <sub>max.</sub> = | 33  | p <sub>at</sub><br>1GHz = | 615                                       |
|    |                  |    |   |                     |   |                           |   |
|    | <b>Frequency</b> |    | <b>Nom. attenuation</b>                   |                     | <b>Nom. attenuation</b>                   |                           | <b>Max. CW power</b>                      |
|    | <b>(GHz)</b>     |    | <b>(dB / m)</b>                           |                     | <b>(dB / ft)</b>                          |                           | <b>(watt)</b>                             |
|    |                  |    | sea level<br>25° C ambient<br>temperature |                     | sea level<br>25° C ambient<br>temperature |                           | sea level<br>40° C ambient<br>temperature |
|    |                  |    |   |                     |   |                           |   |
|    | 1.7              |    | 0.38                                      |                     | 0.116                                     |                           | 472                                       |
|    | 3.3              |    | 0.54                                      |                     | 0.165                                     |                           | 339                                       |
|    | 5.0              |    | 0.67                                      |                     | 0.204                                     |                           | 275                                       |
|    | 6.6              |    | 0.78                                      |                     | 0.238                                     |                           | 239                                       |
|    | 8.3              |    | 0.88                                      |                     | 0.268                                     |                           | 213                                       |
|    | 9.9              |    | 0.96                                      |                     | 0.293                                     |                           | 195                                       |
|    | 11.6             |    | 1.05                                      |                     | 0.320                                     |                           | 181                                       |
|    | 13.2             |    | 1.12                                      |                     | 0.341                                     |                           | 169                                       |
|    | 14.9             |    | 1.20                                      |                     | 0.366                                     |                           | 159                                       |
|    | 16.5             |    | 1.27                                      |                     | 0.387                                     |                           | 151                                       |
|    | 18.2             |    | 1.34                                      |                     | 0.408                                     |                           | 144                                       |
|    | 19.8             |    | 1.40                                      |                     | 0.427                                     |                           | 138                                       |
|    | 21.5             |    | 1.47                                      |                     | 0.448                                     |                           | 133                                       |
|    | 23.1             |    | 1.53                                      |                     | 0.466                                     |                           | 128                                       |
|    | 24.8             |    | 1.59                                      |                     | 0.485                                     |                           | 123                                       |
|    | 26.4             |    | 1.64                                      |                     | 0.500                                     |                           | 120                                       |
|    | 28.1             |    | 1.70                                      |                     | 0.518                                     |                           | 116                                       |
|    | 29.7             |    | 1.76                                      |                     | 0.536                                     |                           | 113                                       |
|    | 31.4             |    | 1.81                                      |                     | 0.552                                     |                           | 110                                       |
|    | 33.0             |    | 1.86                                      |                     | 0.567                                     |                           | 107                                       |

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