

# HUBER+SUHNER® DATA SHEET

## Coaxial Cable: S\_04272\_B



### Description

PE Foam - microwave cable - high screened

### Technical Data

#### Construction

|                  | Material                               | Detail                   | Diameter       |
|------------------|----------------------------------------|--------------------------|----------------|
| Centre conductor | Copper, Silver plated                  | Wire                     | 1.4 mm         |
| Dielectric       | SPE (Foamed Polyethylene)              |                          | 3.82 mm        |
| Outer conductor  | Aluminum / PES                         | longitudinal Foil, 100 % | 3.96 mm        |
| Outer conductor  | Copper, Tin plated                     | Braid, 86 %              | 4.48 mm        |
| Jacket           | PE (Polyethylene)                      | RAL 5014 - bl            | 5.5 mm +/- 0.1 |
| Print            | HUBER+SUHNER S 04272 B 50 Ohm (PA no.) |                          |                |

#### Electrical Data

|                                |                      |                                  |
|--------------------------------|----------------------|----------------------------------|
| Impedance                      | 50                   | $\Omega$ +/- 2                   |
| Max. operating frequency       | 18                   | GHz                              |
| Capacitance                    | 82                   | pF/m                             |
| Velocity of signal propagation | 82                   | %                                |
| Signal delay                   | 4.1                  | ns/m                             |
| Insulation resistance          | $\geq 1 \times 10^8$ | M $\Omega$ m                     |
| Min. screening effectiveness   | > 90                 | dB (up to 18 GHz)                |
| Max. operating voltage         | 0.5                  | kV <sub>rms</sub> (at sea level) |
| Test voltage                   | 1                    | kV <sub>rms</sub> (50 Hz/1 min)  |

#### Mechanical Data

|                     |                                 |          |
|---------------------|---------------------------------|----------|
| Weight              | 4.4                             | kg/100 m |
| Min. bending radius | static                          | 25 mm    |
|                     | repeated (for max. 50 bendings) | 90 mm    |

#### Environmental Data

|                          |                   |
|--------------------------|-------------------|
| Temperature range        | -40 °C... + 85 °C |
| Installation temperature | -20 °C... + 60 °C |
| 2002/95/EC (RoHS)        | compliant         |

#### Ordering Information

Order as S\_04272\_B

#### 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** X9 4 mm / 50 Ohm

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Rev.: N



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

Coefficients:

|    |                  |    |                                           |                    |                                           |                           |                                           |
|----|------------------|----|-------------------------------------------|--------------------|-------------------------------------------|---------------------------|-------------------------------------------|
| a= | 0.197            | b= | 0.045                                     | f <sub>max</sub> = | 18                                        | p <sub>at</sub><br>1GHz = | 120                                       |
|    |                  |    |                                           |                    |                                           |                           |                                           |
|    | <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 |
|    |                  |    |                                           |                    |                                           |                           |                                           |
|    | 0.9              |    | 0.23                                      |                    | 0.070                                     |                           | 126                                       |
|    | 1.8              |    | 0.35                                      |                    | 0.107                                     |                           | 89                                        |
|    | 2.7              |    | 0.45                                      |                    | 0.137                                     |                           | 73                                        |
|    | 3.6              |    | 0.54                                      |                    | 0.165                                     |                           | 63                                        |
|    | 4.5              |    | 0.62                                      |                    | 0.189                                     |                           | 57                                        |
|    | 5.4              |    | 0.70                                      |                    | 0.213                                     |                           | 52                                        |
|    | 6.3              |    | 0.78                                      |                    | 0.238                                     |                           | 48                                        |
|    | 7.2              |    | 0.85                                      |                    | 0.259                                     |                           | 45                                        |
|    | 8.1              |    | 0.93                                      |                    | 0.283                                     |                           | 42                                        |
|    | 9.0              |    | 1.00                                      |                    | 0.305                                     |                           | 40                                        |
|    | 9.9              |    | 1.07                                      |                    | 0.326                                     |                           | 38                                        |
|    | 10.8             |    | 1.13                                      |                    | 0.344                                     |                           | 37                                        |
|    | 11.7             |    | 1.20                                      |                    | 0.366                                     |                           | 35                                        |
|    | 12.6             |    | 1.27                                      |                    | 0.387                                     |                           | 34                                        |
|    | 13.5             |    | 1.33                                      |                    | 0.405                                     |                           | 33                                        |
|    | 14.4             |    | 1.40                                      |                    | 0.427                                     |                           | 32                                        |
|    | 15.3             |    | 1.46                                      |                    | 0.445                                     |                           | 31                                        |
|    | 16.2             |    | 1.52                                      |                    | 0.463                                     |                           | 30                                        |
|    | 17.1             |    | 1.58                                      |                    | 0.482                                     |                           | 29                                        |
|    | 18.0             |    | 1.65                                      |                    | 0.503                                     |                           | 28                                        |

HUBER+SUHNER is certified according to ISO 9001 and ISO 14001

#### WAIVER!

It is exclusively in written agreements that we provide our customers with warrants and representations as to the technical specifications and/or the fitness for any particular purpose. The facts and figures contained herein are carefully compiled to the best of our knowledge, but they are intended for general informational purposes only.



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