

## Flexible RF cable

**S\_02162\_B** Item: 22512310

### Description

S: Low loss RF cables with foam PE dielectrics  
50 Ohm, 6 GHz, 85°C, ø3.15 mm, LSFH jacket



### Technical Data

#### Construction

|                  | Material                     | Detail                  | Diameter         |
|------------------|------------------------------|-------------------------|------------------|
| Centre conductor | Copper                       | Strand-07               | 0.8 mm           |
| Dielectric       | SPE (Foamed Polyethylene)    |                         | 2.1 mm           |
| Outer conductor  | Aluminum / PES               | longitudinal Foil, 100% | 2.15 mm          |
| Outer conductor  | Copper, Tin plated           | Braid, 75 %             | 2.65 mm          |
| Jacket           | LSFH (modified polyethylene) | RAL 9005 - bk           | 3.15 mm +/- 0.05 |

Print: HUBER+SUHNER S 02162 B 50 Ohm (production order number)

#### Electrical Data

|                                |   |
|--------------------------------|---|
| Impedance                      | 50 Ω +/- 2                              |
| Operating Frequency            | 6 GHz                                   |
| Capacitance                    | 82 pF/m                                 |
| Velocity of signal propagation | 81 %                                    |
| Signal delay                   | 4.08 ns/m                               |
| Screening effectiveness        | ≥ 80 dB (up to 6 GHz)                   |
| Operating voltage              | ≤ 0.25 kV <sub>rms</sub> (at sea level) |
| Test voltage                   | 0.5 kV <sub>rms</sub> (50 Hz/1 min)     |

#### Mechanical Data

|                     |   |              |
|---------------------|---|--------------|
| Weight              |   | 2.5 kg/100 m |
| Min. bending radius | static                                      | 16 mm        |
|                     | repeated (for ≤ 500 bendings)               | 30 mm        |
|                     | dynamic                                     | 50 mm        |
| Tensile stress test | VW TL 821 33                                |              |
| Load test           | IEC 794-1-E3                                |              |
| Abrasion test       | MIL-T-81490 - §4.7.19 - prod. II - modified |              |

#### Environmental Data

|  |   |
|--|---|
| Temperature range                                    | -40 °C ... +85 °C                           |
| Installation temperature                             | -20 °C... +60 °C                            |
| Cold bend test                                       | VW TL 821 33                                |
| Ageing test  | VW TL 821 33                                |
| Thermal stress test                                  | IEC 61196-1 § 10.9                          |
| Flame propagation test                               | IEC 60332-1,                                |
| Halogen test   | IEC 60754                                   |
| Halogen free   | Yes   |
| 2011/65/EU (RoHS - including 2015/863 and 2017/2102) | compliant                                   |
| 1907/2006/EC (REACH)                                 | compliant                                   |
| Flex life test                                       | MIL-T-81490 - §4.7.15 - prod. II - modified |

### 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 S9 2 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 = 0.435

b = 0.1019

$f_{\max} = 6$

P at 1GHz = 82

| Frequency<br>(GHz) | Nom. attenuation<br>(dB / m)<br>sea level 25° C<br>ambient<br>temperature | Nom. attenuation<br>(dB / ft)<br>sea level 25° C<br>ambient<br>temperature | Max. CW power<br>(W)<br>sea level 40° C<br>ambient<br>temperature |
|--------------------|---|--|---|
| 0,3                | 0,27  | 0,082  | 150   |
| 0,6                | 0,4   | 0,121  | 106   |
| 0,9                | 0,5   | 0,154  | 86  |
| 1,2                | 0,6   | 0,183  | 75  |
| 1,5                | 0,69  | 0,209  | 67  |
| 1,8                | 0,77  | 0,234  | 61  |
| 2,1                | 0,84  | 0,257  | 57  |
| 2,4                | 0,92  | 0,280  | 53  |
| 2,7                | 0,99  | 0,302  | 50  |
| 3,0                | 1,06  | 0,323  | 47  |
| 3,3                | 1,13  | 0,343  | 45  |
| 3,6                | 1,19  | 0,363  | 43  |
| 3,9                | 1,26  | 0,383  | 42  |
| 4,2                | 1,32  | 0,402  | 40  |
| 4,5                | 1,38  | 0,421  | 39  |
| 4,8                | 1,44  | 0,440  | 37  |
| 5,1                | 1,5   | 0,458  | 36  |
| 5,4                | 1,56  | 0,476  | 35  |
| 5,7                | 1,62  | 0,494  | 34  |
| 6,0                | 1,68  | 0,511  | 33  |