

## Flexible RF cable

**SPUMA\_400** Item: 84102703

### Description

Spuma: Flexible, low-loss RF cables (LMR\* alternatives)

50 Ohm, 6 GHz, 85°C, ø10.25 mm, PE jacket, CPR qualified



### Technical Data

#### Construction

|                  | Material                  | Detail                  | Diameter         |
|------------------|---------------------------|-------------------------|------------------|
| Centre conductor | Aluminium / Copper        | Wire                    | 2.74 mm          |
| Dielectric       | SPE (Foamed Polyethylene) |                         | 7.24 mm          |
| Outer conductor  | Aluminum / PES            | longitudinal Foil, 100% | 7.4 mm           |
| Outer conductor  | Copper, Tin plated        | Braid, 71 %             | 8.15 mm          |
| Jacket           | PE (Polyethylene)         | RAL 9005 - bk           | 10.25 mm +/- 0.1 |

Print: HUBER+SUHNER SPUMA 400 50 Ohm (production order number)

#### Electrical Data

|                                |  |
|--------------------------------|--|
| Impedance                      | 50 Ω +/- 2                             |
| Operating Frequency            | 6 GHz                                  |
| Capacitance                    | 78 pF/m                                |
| Velocity of signal propagation | 85 %                                   |
| Signal delay                   | 3.9 ns/m                               |
| Screening effectiveness        | ≥ 90 dB (up to 6 GHz)                  |
| Operating voltage              | ≤ 1.6 kV <sub>rms</sub> (at sea level) |
| Test voltage                   | 3 kV <sub>rms</sub> (50 Hz/1 min)      |

#### Mechanical Data

|                     |        |              |
|---------------------|--------|--------------|
| Weight              |        | 9.4 kg/100 m |
| Min. bending radius | static | 25 mm        |
|                     |        | 100 mm       |

#### Environmental Data

|  |                           |
|--|---------------------------|
| Temperature range                                    | -40 °C ... +85 °C         |
| Installation temperature                             | -20 °C... +60 °C          |
| Cold bend test                                       | MIL-C-17 § 4.8.19         |
| Halogen test   | IEC 60754                 |
| Halogen free   | Yes                       |
| 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 |
| 2011/305/EU (CPR)                                    | compliant, Fca            |

### Additional Information

\*) LMR is a registered trademark of Times Microwave Inc.

#### Remarks

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

#### Suitable Connectors

Cable group U30 7 mm / 50 Ohm

## Flexible RF cable

**SPUMA\_400** Item: 84102703

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

Coefficients:

a = 0.1241

b = 0.008

f<sub>max</sub> = 6

P at 1GHz = 600

| 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                | 0,07  | 0,021  | 1095  |
| 0,6                | 0,1   | 0,031  | 775   |
| 0,9                | 0,12  | 0,038  | 632   |
| 1,2                | 0,15  | 0,044  | 548   |
| 1,5                | 0,16  | 0,050  | 490   |
| 1,8                | 0,18  | 0,055  | 447   |
| 2,1                | 0,2   | 0,060  | 414   |
| 2,4                | 0,21  | 0,064  | 387   |
| 2,7                | 0,23  | 0,069  | 365   |
| 3,0                | 0,24  | 0,073  | 346   |
| 3,3                | 0,25  | 0,077  | 330   |
| 3,6                | 0,26  | 0,081  | 316   |
| 3,9                | 0,28  | 0,084  | 304   |
| 4,2                | 0,29  | 0,088  | 293   |
| 4,5                | 0,3   | 0,091  | 283   |
| 4,8                | 0,31  | 0,095  | 274   |
| 5,1                | 0,32  | 0,098  | 266   |
| 5,4                | 0,33  | 0,101  | 258   |
| 5,7                | 0,34  | 0,104  | 251   |
| 6,0                | 0,35  | 0,107  | 245   |