

## Flexible RF cable

**SPUMA\_240-FR-AM**    **Item: 85069656**

### Description

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

50 Ohm, 6 GHz, 85°C, ø6.17 mm, LSFH jacket, Flame retardant, Bus qualified



### Technical Data

#### Construction

|                  | Material                     | Detail                  | Diameter        |
|------------------|------------------------------|-------------------------|-----------------|
| Centre conductor | Copper                       | Wire                    | 1.42 mm         |
| Dielectric       | SPE (Foamed Polyethylene)    |                         | 3.82 mm         |
| Outer conductor  | Aluminum / PES               | longitudinal Foil, 100% | 3.94 mm         |
| Outer conductor  | Copper, Tin plated           | Braid, 94 %             | 4.52 mm         |
| Jacket           | LSFH (modified polyethylene) | RAL 9005 - bk           | 6.17 mm +/- 0.1 |

Print: HUBER+SUHNER SPUMA 240-FR-AM 50 Ohm (production order number)

#### Electrical Data

|                                |  |
|--------------------------------|--|
| Impedance                      | 50 Ω +/- 2                             |
| Operating Frequency            | 6 GHz                                  |
| Capacitance                    | 78.9 pF/m                              |
| Velocity of signal propagation | 82.6 %                                 |
| Signal delay                   | 4.05 ns/m                              |
| Screening effectiveness        | ≥ 90 dB (up to 6 GHz)                  |
| Operating voltage              | ≤ 0.9 kV <sub>rms</sub> (at sea level) |
| Test voltage                   | 1.5 kV <sub>rms</sub> (50 Hz/1 min)    |

#### Mechanical Data

|                     |        |              |
|---------------------|--------|--------------|
| Weight              |        | 6.1 kg/100 m |
| Min. bending radius | static | 14 mm        |
|                     |        | 53 mm        |

#### Environmental Data

|  |                           |
|--|---------------------------|
| Temperature range                                    | -40 °C ... +85 °C         |
| Installation temperature                             | -20 °C... +60 °C          |
| 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 |

### Additional Information

ISO 6722-1 5.22 (UN ECE-R 118.01) compliant \*) 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 | X28 4 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 = 0.257

b = 0.009

f<sub>max</sub> = 6

P at 1GHz = 260

| 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                | 0,14  | 0,044  | 475   |
| 0,6                | 0,2   | 0,062  | 336   |
| 0,9                | 0,25  | 0,077  | 274   |
| 1,2                | 0,29  | 0,089  | 237   |
| 1,5                | 0,33  | 0,100  | 212   |
| 1,8                | 0,36  | 0,110  | 194   |
| 2,1                | 0,39  | 0,119  | 179   |
| 2,4                | 0,42  | 0,128  | 168   |
| 2,7                | 0,45  | 0,136  | 158   |
| 3,0                | 0,47  | 0,144  | 150   |
| 3,3                | 0,5   | 0,151  | 143   |
| 3,6                | 0,52  | 0,158  | 137   |
| 3,9                | 0,54  | 0,165  | 132   |
| 4,2                | 0,56  | 0,172  | 127   |
| 4,5                | 0,59  | 0,179  | 123   |
| 4,8                | 0,61  | 0,185  | 119   |
| 5,1                | 0,63  | 0,191  | 115   |
| 5,4                | 0,65  | 0,197  | 112   |
| 5,7                | 0,66  | 0,203  | 109   |
| 6,0                | 0,68  | 0,208  | 106   |

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