

Flexible RF cable SPUMA_400-FR-01

Description

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

50 Ohm, 6 GHz, 85°C, ø10.25 mm, LSFH jacket, Flame retardant,
Railway and 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, 78 % | 8.15 mm |
| Jacket | LSFH (modified polyethylene) | RAL 9005 - bk | 10.25 mm +/- 0.1 |

Print: HUBER+SUHNER SPUMA 400-FR-01 50 Ohm Cca-s1a,d0,a1 (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 _{rms} (at sea level) |
| Test voltage | 3 kV _{rms} (50 Hz/1 min) |

Mechanical Data

| | |
|---------------------|---------------------------|
| Weight | 11.5 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 |
| Uv resistance test | ISO 4892-2A |
| Flame propagation test | UL 1581 § 1100, UL 1581 § 1080 (VW-1), EN 60332-1-2, EN 50266-2-5, IEC 60332-3-25 |
| Smoke density test | EN 61034-2 |
| 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, Cca-s1a,d0,a1 |

Additional Information

EN 45545-2 compliant hazard level for indoor cables: HL3 NFPA-130 compliant An operating temperature of -55°C is feasible for static applications. *) LMR is a registered trademark of Times Microwave Inc.

Ordering Information

Order as SPUMA_400-FR-01

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

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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 = 0.1241

b = 0.008

$f_{max} = 6$

P at 1GHz = 600

| Frequency (GHz) | Nom. attenuation (dB / m) sea level 25° C ambient temperature | Nom. attenuation (dB / ft) sea level 25° C ambient temperature | Max. CW power (W) sea level 40° C ambient 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 |