

# Corrugated, 50 Ohm, 8 GHz, 85°C, Ø15.9 mm, PE jacket

## SUCOFEEED\_1/2

### Properties

- Low loss, low IM distortion levels
- High power capability
- High shielding effectiveness
- Flame retardant designs available



| Construction     |                                  |                        |                    |
|------------------|----------------------------------|------------------------|--------------------|
| Component        | Material                         | Detail                 | Diameter           |
| Centre conductor | Copper clad Aluminum             | Wire                   | 4.8 mm             |
| Dielectric       | SPE (Foamed Polyethylene)        |                        | 12.1 mm            |
| Outer conductor  | Copper                           | Tube, corrugated, 100% | 13.8 mm            |
| Jacket           | PE-LD (Low-density polyethylene) | RAL 9005 - bk          | 15.9 mm +/- 0.4 mm |

| Electrical data                  |             |
|----------------------------------|-------------|
| Impedance                        | 50 Ω +/-1Ω  |
| Operating frequency              | ≤ 8 GHz     |
| Capacitance                      | 75.9 pF/m   |
| Inductance                       | 0.2 μH/m    |
| Velocity of signal propagation   | 88 %        |
| Signal delay                     | 3.8 ns/m    |
| Screening effectiveness          | 120dB       |
| Insulation resistance            | 5000 MΩ*km  |
| Inner conductor resistance       | 1.6 Ω/km    |
| Operating Voltage (at sea level) | ≤ 1.6 kVrms |
| Test voltage (50 Hz/1 min)       | ≤ 3.3 kVrms |

| Mechanical data         |                             |
|-------------------------|-----------------------------|
| Weight                  | approx. 250 g/m             |
| Static bending radius   | ≥ 70 mm                     |
| Repeated bending radius | 125 mm (bendings, up to 15) |
| Tensile strength        | 1100 N                      |

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| Environmental data       |                                              |
|--------------------------|----------------------------------------------|
| Operation temperature    | -55 °C ... 85 °C                             |
| Installation temperature | -40 °C ... 60 °C                             |
| CPR class                | Fca                                          |
| Fire characteristics     | free of halogenes, acc. standard IEC 60754-1 |
| UV resistance            | ISO 4892-2                                   |

| Suitable connectors |     |
|---------------------|-----|
| Cable group         | M12 |

| Ordering information |                  |                            |
|----------------------|------------------|----------------------------|
| Item number          | Item description | Available as assembly only |
| 84099352             | SUCOFEEED_1/2    | No                         |

| Power Matrix                                                                                                                  |                                    |                                    |                                    |
|-------------------------------------------------------------------------------------------------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| Calculation: typical Attenuation [ formula: $(a \cdot f^{0.5} + b \cdot f)$ ] and maximum Power CW [ formula: $(p/f^{0.5})$ ] |                                    |                                    |                                    |
| a coefficient typical =                                                                                                       | <b>0.0673987</b>                   | b coefficient typical =            | <b>0.00545959</b>                  |
| fmax =                                                                                                                        | <b>8</b>                           | P at 1 GHz =                       | <b>1040</b>                        |
| Frequency<br>GHz                                                                                                              | Nom. attenuation<br>(dB/m)         | Nom. attenuation<br>(dB/ft)        | CW power<br>(W)                    |
|                                                                                                                               | sea level 25°C ambient temperature | sea level 25°C ambient temperature | sea level 40°C ambient temperature |
| 0.10                                                                                                                          | 0.022                              | 0.007                              | 3289                               |
| 0.20                                                                                                                          | 0.031                              | 0.010                              | 2326                               |
| 0.40                                                                                                                          | 0.045                              | 0.014                              | 1644                               |
| 0.60                                                                                                                          | 0.055                              | 0.017                              | 1343                               |
| 1.00                                                                                                                          | 0.073                              | 0.022                              | 1040                               |
| 1.50                                                                                                                          | 0.091                              | 0.028                              | 849                                |
| 2.00                                                                                                                          | 0.106                              | 0.032                              | 735                                |
| 6.00                                                                                                                          | 0.198                              | 0.060                              | 425                                |
| 6.50                                                                                                                          | 0.207                              | 0.063                              | 408                                |
| 7.00                                                                                                                          | 0.217                              | 0.066                              | 393                                |
| 7.50                                                                                                                          | 0.226                              | 0.069                              | 380                                |
| 8.00                                                                                                                          | 0.234                              | 0.071                              | 368                                |

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DOCUMENT PIM-P751 / Date of publication: 08.08.2024 / uncontrolled copy