

RG214 LSFH, 50 Ohm, 6 GHz, 105°C, ø11.1 mm, RADOX® jacket

RADOX_RF_214

Properties

- Halogen free alternative to RG_214
- Low smoke
- - ozone, UV and weathering resistance
- Railway qualified



| Construction | | | |
|---------------------|---------------------------------|---------------|--------------------|
| Component | Material | Detail | Diameter |
| Centre conductor | Copper, Silver plated | Strand-07 | 2.25 mm |
| Dielectric | PEX (Polyethylene cross-linked) | | 7.28 mm |
| Outer conductor | Copper, Silver plated | Braid, 93% | 8 mm |
| Outer conductor | Copper, Silver plated | Tape, 95% | 8.6 mm |
| Jacket | RADOX EM104 | RAL 9005 - bk | 11.1 mm +/- 0.1 mm |

| Electrical data | |
|----------------------------------|-------------------------------------|
| Impedance | 50 Ω +/- 2Ω |
| Operating frequency | ≤ 6 GHz |
| Capacitance | 101.4 pF/m |
| Velocity of signal propagation | 66 % |
| Signal delay | 5.03 ns/m |
| Screening effectiveness | 81 dB at frequency 0.1 GHz ... 6GHz |
| Insulation resistance | 10000000 MΩ*m |
| Operating Voltage (at sea level) | ≤ 5 kVrms |
| Test voltage (50 Hz/1 min) | ≤ 10 kVrms |

| Mechanical data | |
|-------------------------|-----------------------------|
| Weight | approx. 203 g/m |
| Static bending radius | ≥ 50 mm |
| Repeated bending radius | 110 mm (bendings, up to 50) |
| Dynamic bending radius | < 170 mm |

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| Environmental data | |
|----------------------------|--|
| Operation temperature | -40 °C ... 105 °C |
| Installation temperature | -20 °C ... 60°C |
| Flame propagation standard | EN 60332-1-2 |
| | IEC 60332-3-25 |
| Fire characteristics | free of halogenes, acc. standard IEC 60754 |
| Smoke test | EN 61034-2 |

Additional Information

EN 4545 compliant Hazard level for indoor cables: HL3 NFPA-130 compliant An operating temperature of -55°C is feasible for static applications.

Suitable connectors

| | |
|-------------|-----|
| Cable group | U43 |
|-------------|-----|

Ordering information

| Item number | Item description | Available as assembly only |
|-------------|------------------|----------------------------|
| 85023731 | RADOX_RF_214 | 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 = | 0.2203 | b coefficient typical = | 0.0874 |
| fmax = | 6.0 | P at 1 GHz = | 560.0 |
| Frequency | Nom. attenuation | Nom. attenuation | CW power |
| GHz | (dB/m) | (dB/ft) | (W) |
| | sea level 25°C ambient temperature | sea level 25°C ambient temperature | sea level 40°C ambient temperature |
| 0.10 | 0.078 | 0.024 | 1771 |
| 0.20 | 0.116 | 0.035 | 1252 |
| 0.30 | 0.147 | 0.045 | 1022 |
| 0.40 | 0.174 | 0.053 | 885 |
| 0.60 | 0.223 | 0.068 | 723 |
| 0.80 | 0.267 | 0.081 | 626 |
| 1.00 | 0.308 | 0.094 | 560 |
| 1.20 | 0.346 | 0.105 | 511 |
| 1.40 | 0.383 | 0.117 | 473 |
| 1.60 | 0.418 | 0.127 | 443 |
| 1.80 | 0.453 | 0.138 | 417 |
| 2.00 | 0.486 | 0.148 | 396 |
| 2.50 | 0.567 | 0.173 | 354 |
| 3.00 | 0.644 | 0.196 | 323 |
| 3.50 | 0.718 | 0.219 | 299 |
| 4.00 | 0.790 | 0.241 | 280 |
| 4.50 | 0.861 | 0.262 | 264 |
| 5.00 | 0.930 | 0.283 | 250 |
| 5.50 | 0.997 | 0.304 | 239 |
| 6.00 | 1.064 | 0.324 | 229 |

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