



HUBER+SUHNER® DATA SHEET

RF Power Switch QN Interface: PS92_QN-50-0-6/131_N



Technical Data

| TYPICAL ELECTRICAL DATA | TESTING STANDARD | REQUIREMENTS | |
|---|------------------------------------|---|---|
| Impedance | | 50 Ω | |
| Frequency range | | DC ... 4 GHz | |
| Return loss (Measurement done with H+S test board, PCB layout on page 4) | |  |  |
| DC ... 1 GHz | | 21 dB | 21 dB |
| 1 ... 2 GHz | | 18 dB | 18 dB |
| 2 ... 3 GHz | | 16 dB | 16 dB |
| 3 ... 4 GHz | | 12 dB | 12 dB |
| Insertion loss switched and direct line | | DC ... 1 GHz | 0.10 dB |
| | | 1 ... 2 GHz | 0.15 dB |
| | | 2 ... 4 GHz | 0.25 dB |
| Isolation between switched and direct line | | DC ... 1 GHz | 47 dB |
| | | 1 ... 2 GHz | 43 dB |
| | | 2 ... 3 GHz | 40 dB |
| | | 3 ... 4 GHz | 35 dB |
| Power handling (continuous power) ¹⁾ | | 100 W | |
| Current DC at 25°C | | 4 Ampere | |
| Dielectric withstanding voltage (at sea level) | MIL-STD-202, Method 301 | 500 V rms, 50 Hz | |
| Working voltage (at sea level) | MIL-STD-202, Method 301 | 170 V rms, 50 Hz | |
| Insulation resistance | MIL-STD-202, Method 302 | ≥ 5 GΩ | |
| Contact resistance - centre contact - outer contact (switched line) | MIL-PRF-39012, Paragraph 4.7.13 | ≤ 6 mΩ ≤ 3 mΩ | |

| TYPICAL MECHANICAL DATA | TESTING STANDARD | REQUIREMENTS | |
|--|------------------------------------|---|--|
| Switching movement in connector interface | | max 3 mm | |
| Centre contact retention force | MIL-PRF-39012, Paragraph 4.7.9 | Lateral pins ≥ 2 N / 0.4 lbf Interface contact ≥ 28 N / 6.3 lbf (only pushing) | |
| Durability (matings) | MIL-PRF-39012, Paragraph 4.7.12 | 100 | |

| TYPICAL PROCESSING DATA | TESTING STANDARD | REQUIREMENTS | |
|--|---------------------------|--|--|
| Adherent to the print - shearing ²⁾ - pulling (vertical to PCB) ²⁾ - torque ²⁾ | | > 80 N for 1 min > 80 N for 1 min 1.2 Nm | |
| Lead free reflow solder process | IPC / JEDEC J-STD-020C | recommended | |
| Packing | EIA-STD-481 | Tape and Reel | |

- 1) Turn off system before switching the RF Power Switch. Under load maximum short term temperature +105°C / 221°F up to 60 seconds.
2) Valid for recommended PCB structure only, force applied on interface reference plane.

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Technical Data (cont.)

| TYPICAL ENVIRONMENTAL DATA | TESTING STANDARD | REQUIREMENTS |
|----------------------------|---|---------------------------------------|
| Temperature range | Long term | -40°C ... +85°C / -40°F ... 185°F |
| Corrosion | MIL-STD-202, Method 101, Condition B | Salt mist test 48 h |
| High temperature endurance | IEC-61-169-1 | 400 h / +165°C |
| Thermal shock | MIL-STD-202, Method 107, Condition A modified | -40°C ... +85°C / -40°F ... 185°F |
| Solderability | MIL-STD-883D | Field test |
| Vibration | MIL-STD-202, Method 204, Condition A | 10g Max. interruption < 1µs |
| Mechanical shock | MIL-STD-202, Method 213, Condition I | 100g / 6ms Max. interruption < 1µs |
| Basic transportation | MIL-STD-810E | Common carrier environment 2000 miles |

| MATERIAL DATA | | | |
|----------------|--------------------------|-----------------------------|-----------|
| CONNECTOR PART | STANDARDS | MATERIAL | PLATING |
| Centre contact | QQ-C-530 / QQ-B-626 | copper beryllium / brass | SUCOPRO |
| Outer contact | QQ-B-626 | brass | SUCOPLATE |
| Body | QQ-B-626 | brass | SUCOPRO |
| Insulator | SUHNER® specification | PEEK / PTFE | |

| ENVIRONMENTAL SAFETY | | |
|---|------------|-------------------------------|
| TITLE | STANDARD | STATUS |
| DIRECTIVE 2002/95/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHs) | 2002/95/EC | Compliant (using exception 6) |

The products are designed and guaranteed to pass the above mentioned test procedures. Any additional or different requirement arising from specific applications or environmental conditions which is not covered by these test procedures is subject to request.

Ordering Information

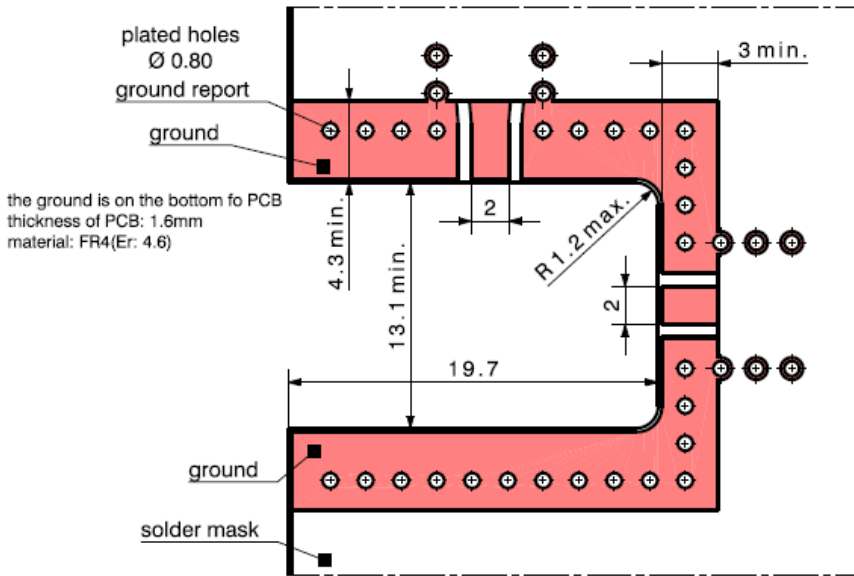
Tape and reel package **PS92_QN-50-0-6/131_NM** Item number: **84041613**
Single package **PS92_QN-50-0-6/131_NE** Item number: **84041791**

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PCB Layout



Packaging

Tape according to standard IEC 286-3 / EIA-481 44 mm width
 Reel outer diameter 330mm (13") inclusive 100 pieces

