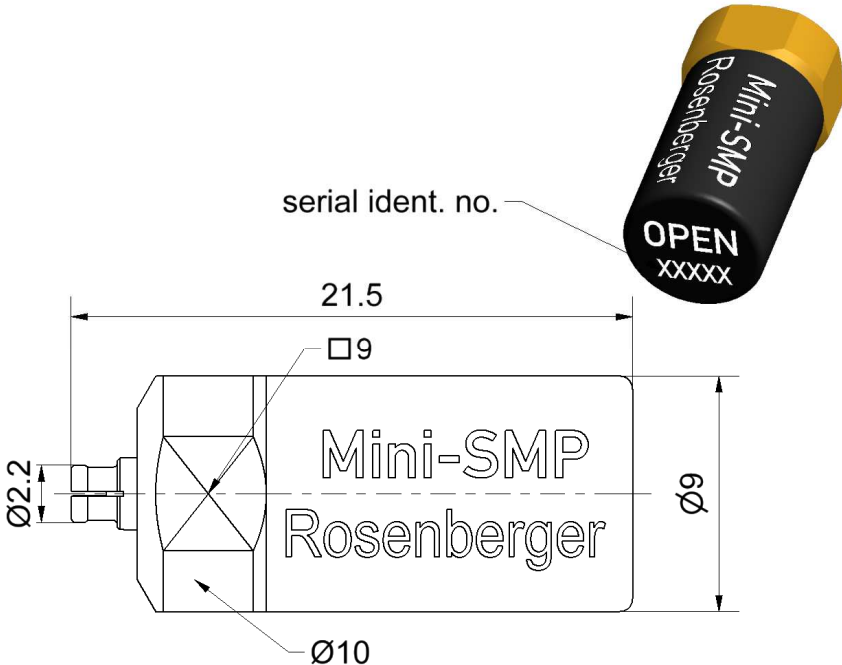


|                                                                                                                                                                                                       |                   |                                                                                                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|------------------------------------------------------------------------------------------------------------|
| Technical Data Sheet                                                                                                                                                                                  |                   | Rosenberger                                                                                                |
| Mini-SMP                                                                                                                                                                                              | Open Circuit Jack | 18K12L-000D3                                                                                               |
| <div><p>serial ident. no.</p><p>21.5</p><p>9</p><p>Ø2.2</p><p>Mini-SMP<br/>Rosenberger</p><p>Ø10</p><p>6</p></div> |                   |                                                                                                            |
| All dimensions are in mm; tolerances according to ISO 2768 m-H                                                                                                                                        |                   |                                                                                                            |
| <b>Interface</b>                                                                                                                                                                                      |                   |                                                                                                            |
| According to                                                                                                                                                                                          |                   | MIL-STD-348<br>Mateable with GPPO™ (Gilbert Engineering Co., Inc.)<br>and SSMP™ (Connectors Devices, Inc.) |
| <b>Documents</b>                                                                                                                                                                                      |                   |                                                                                                            |
| Application note                                                                                                                                                                                      |                   | AN001 "Calibration Services"                                                                               |
| <b>Material and plating</b>                                                                                                                                                                           |                   |                                                                                                            |
| <b>Connector parts</b>                                                                                                                                                                                | <b>Material</b>   | <b>Plating</b>                                                                                             |
| Center conductor                                                                                                                                                                                      | CuBe              | Gold, min. 1.27 µm, over nickel                                                                            |
| Outer conductor                                                                                                                                                                                       | CuBe              | Gold, min. 1.27 µm, over nickel                                                                            |
| Dielectric                                                                                                                                                                                            | PEEK              |                                                                                                            |
| Rosenberger Hochfrequenztechnik GmbH & Co. KG<br>P.O.Box 1260 D-84526 Tittmoning Germany<br>www.rosenberger.de                                                                                        |                   | Tel. : +49 8684 18-0<br>Email : info@rosenberger.de                                                        |
|                                                                                                                                                                                                       |                   | Page<br>1 / 3                                                                                              |

### Electrical data

|                                       |                                                        |
|---------------------------------------|--------------------------------------------------------|
| Frequency range                       | DC to 40 GHz                                           |
| Return loss                           | ≤ 0.40 dB, DC to 18 GHz<br>≤ 0.50 dB, 18 GHz to 40 GHz |
| Error from nominal phase <sup>1</sup> | ≤ 5.0°, DC to 18 GHz<br>≤ 10.0°, 18 GHz to 40 GHz      |

<sup>1</sup> The nominal phase is defined by the Offset Delay, the Offset Loss and the Fringing Capacitances

### Mechanical data

|                               |                    |
|-------------------------------|--------------------|
| Mating cycles                 |                    |
| if mating part is Smooth bore | ≥ 500              |
| if mating part is Full detent | ≥ 100              |
| Engagement force              |                    |
| - Smooth bore                 | 11 N typical       |
| - Full detent                 | 19 N typical       |
| Disengagement force           |                    |
| - Smooth bore                 | 11 N typical       |
| - Full detent                 | 29 N typical       |
| Gauge                         | 0.00 mm to 0.08 mm |

### General standard definition

For proper operation the vector network analyzer (VNA) needs a model describing the electrical behaviour of this calibration standard. The different models, units, and terms used will depend on the VNA type and they will have to be entered into the VNA. All values are based on typical geometry and plating.

|                                     |                                |
|-------------------------------------|--------------------------------|
| Offset $Z_0$ / Impedance / $Z_0$    | 50 $\Omega$                    |
| Offset Delay                        | 17.5121 ps                     |
| Length (electrical) / Offset Length | 5.25 mm                        |
| Offset Loss                         | 3.75 G $\Omega$ /s             |
| Loss                                | 0.0114 dB/ $\sqrt{\text{GHz}}$ |
| Fringing Capacitances <sup>2</sup>  |                                |

<sup>2</sup> Fringing Capacitances are determined individually for each open circuit and are documented in a Calibration Certificate.

### Environmental data

|                                             |                   |
|---------------------------------------------|-------------------|
| Operating temperature range <sup>3</sup>    | + 20 °C to +26 °C |
| Rated temperature range of use <sup>4</sup> | 0 °C to +50 °C    |
| Storage temperature range                   | - 40 °C to +85 °C |

RoHS compliant

<sup>3</sup> Temperature range over which these specification are valid.

<sup>4</sup> This range is underneath and above the operating temperature range, within the open circuit is fully functional and could be used without damage.

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |                   |               |              |                                                     |                           |                  |                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------|---------------|--------------|-----------------------------------------------------|---------------------------|------------------|-------------------|
| Technical Data Sheet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                   |               | Rosenberger  |                                                     |                           |                  |                   |
| Mini-SMP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  | Open Circuit Jack |               | 18K12L-000D3 |                                                     |                           |                  |                   |
| <div>Declaration of calibration options</div> <div>Factory Calibration</div> <div>Standard delivery for this calibration standard includes a Factory Calibration. The Calibration Certificate issued reports individual calibration results, <b>traceable to Rosenberger standards</b>, national / international standards are not available. Model based standard definitions are individually optimized and reported in an Agilent/Keysight, Rohde &amp; Schwarz and Anritsu compatible VNA format.</div> <div>Accredited Calibration</div> <div>Not available.</div> <div>For further, more detailed information see application note AN001 on the Rosenberger homepage.</div> <div>Calibration interval</div> <div>Recommendation12 months</div> <div>Packing</div> <div>Standard1 pce in box</div> <div>Weigth5.0 g/pce</div> |  |                   |               |              |                                                     |                           |                  |                   |
| <div>While the information has been carefully compiled to the best of our knowledge, nothing is intended as representation or warranty on our part and no statement herein shall be construed as recommendation to infringe existing patents. In the effort to improve our products, we reserve the right to make changes judged to be necessary.</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |                   |               |              |                                                     |                           |                  |                   |
| Draft                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  | Date              | Approved      | Date         | Rev.                                                | Engineering change number | Name             | Date              |
| Marcel Panicke                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  | 12.10.09          | Markus Müller | 07.11.16     | e00                                                 | 15-1674                   | Marion Striegler | 07.11.16          |
| Rosenberger Hochfrequenztechnik GmbH & Co. KG<br>P.O.Box 1260 D-84526 Tittmoning Germany<br>www.rosenberger.de                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                   |               |              | Tel. : +49 8684 18-0<br>Email : info@rosenberger.de |                           |                  | Page<br><br>3 / 3 |

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