



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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All dimensions are in mm; tolerances according to ISO 2768 m-H

## Interface

According to

IEC 61169-54

## Contents and Documentation

This kit is delivered with

- **Standard Definitions Card**  
Printed Standard Definitions that can be used on nearly all Vector Network Analyzers
- **Test Results Documentation**
- **Lanyard**
- **Hard Shell Case**

## Material and plating

### Connector parts

Center conductor  
Outer conductor  
Body  
Dielectric  
Substrate

### Material

CuBe  
CuBe or equiv.  
Aluminum  
PTFE  
Al<sub>2</sub>O<sub>3</sub>

### Plating

Gold, min. 1.27 µm, over nickel  
Silver, 3-6 µm  
black anodized



### Electrical data

Frequency range DC to 12 GHz

#### Thru

Return loss  
 $\geq 36$  dB, DC to 4 GHz  
 $\geq 30$  dB, 4 GHz to 6 GHz  
 $\geq 20$  dB, 6 GHz to 12 GHz

#### Open

Error from nominal phase<sup>1</sup>  
 $\leq 2.5^\circ$ , DC to 6 GHz  
 $\leq 3.0^\circ$ , 6 GHz to 12 GHz

#### Short

Error from nominal phase<sup>2</sup>  
 $\leq 2.5^\circ$ , DC to 6 GHz  
 $\leq 3.0^\circ$ , 6 GHz to 12 GHz

#### Load

Return loss  
 $\geq 40$  dB, DC to 4 GHz  
 $\geq 35$  dB, 4 GHz to 6 GHz  
 $\geq 25$  dB, 6 GHz to 12 GHz

DC-Resistance  $50 \Omega \pm 0.5 \Omega$

Power handling  $\leq 1.0$  W

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

<sup>2</sup> The nominal phase is defined by the Offset Delay, the Offset Loss and the Short Inductance

### Mechanical data

Mating cycles  $\geq 100$   
Maximum torque 5 Nm  
Recommended torque 2 Nm  
Gauge 3.10 mm to 3.25 mm

### General standard definitions

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.

#### Thru

Offset  $Z_0$  / Impedance /  $Z_0$  50  $\Omega$   
Offset Delay 208.611 ps  
Length (electrical) / Offset Length 62.54 mm  
Offset Loss 2.50 G $\Omega$ /s  
Loss 0.0453 dB/ $\sqrt{\text{GHz}}$   
Line Loss 0.0007 dB/mm

#### Open

Offset  $Z_0$  / Impedance /  $Z_0$  50  $\Omega$   
Offset Delay 66.946 ps  
Length (electrical) / Offset Length 20.07 mm  
Offset Loss 0.70 G $\Omega$ /s  
Loss 0.0081 dB/ $\sqrt{\text{GHz}}$   
Fringing Capacitances  
 $C_0 = 8.94000 \times 10^{-15}$  F / 8.94000 fF  
 $C_1 = -4720.00 \times 10^{-27}$  F/Hz / -4.72000 fF /GHz  
 $C_2 = 962.000 \times 10^{-36}$  F/Hz<sup>2</sup> / 0.96200 fF /GHz<sup>2</sup>  
 $C_3 = -52.8000 \times 10^{-45}$  F/Hz<sup>3</sup> / -0.05280 fF /GHz<sup>3</sup>

Technical Data Sheet				Rosenberger																			
4.3-10		Calibration Kit Jack		64K30R-MSOTS3																			
<div>Short</div> <div>Offset Z<sub>o</sub> / Impedance / Z<sub>o</sub>50 Ω</div> <div>Offset Delay66.946 ps</div> <div>Length (electrical) / Offset Length20.07 mm</div> <div>Offset Loss0.70 GΩ/s</div> <div>Loss0.0081 dB/√GHz</div> <div>Short Inductance</div> <div>L<sub>0</sub> = 20.400 x 10<sup>-12</sup> H / 20.400 pH</div> <div>L<sub>1</sub> = 9950.0 x 10<sup>-24</sup> H/Hz / 9.9500 pH/GHz</div> <div>L<sub>2</sub> = -2813.0 x 10<sup>-33</sup> H/Hz<sup>2</sup> / -2.8130 pH/GHz<sup>2</sup></div> <div>L<sub>3</sub> = 112.50 x 10<sup>-42</sup> H/Hz<sup>3</sup> / 0.1125 pH/GHz<sup>3</sup></div> <div>Load</div> <div>Offset Z<sub>o</sub> / Impedance / Z<sub>o</sub>50 Ω</div> <div>Offset Delay0.0000 ps</div> <div>Length (electrical) / Offset Length0.000 mm</div> <div>Offset Loss0.00 GΩ/s</div> <div>Loss0.0000 dB/√GHz</div> <div>Environmental data</div> <div>Operating temperature range<sup>3</sup>+20 °C to +26 °C</div> <div>Rated temperature range of use<sup>4</sup>0 °C to +50 °C</div> <div>Storage temperature range- 40 °C to +85 °C</div> <div>RoHScompliant</div> <div><sup>3</sup> Temperature range over which these specifications are valid.</div> <div><sup>4</sup> This range is underneath and above the operating temperature range, within the calibration kit is fully functional and could be used without damage</div> <div>Declaration of documentation</div> <div>Standard delivery for this kit includes Test Results. The documentation issued reports which quantities were tested individually, traceable to national / international standards. Model based standard definitions of the calibration standards are reported in Agilent / Keysight, Rohde &amp; Schwarz and Anritsu compatible VNA format.</div> <div>Inspection interval</div> <div>Recommendation12 months</div> <div>Packing</div> <div>Standard1 pce in bag</div> <div>Weight313 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> <table><tr><td>Draft</td><td>Date</td><td>Approved</td><td>Date</td><td>Rev.</td><td>Engineering change number</td><td>Name</td><td>Date</td></tr><tr><td>Marcel Panicke</td><td>07.06.16</td><td>Herbert Babinger</td><td>19.10.17</td><td>d00</td><td>17-s336</td><td>M. Knoll</td><td>19.10.17</td></tr></table> <div>Rosenberger Hochfrequenztechnik GmbH &amp; Co. KG P.O.Box 1260 D-84526 Tittmoning Germany www.rosenberger.de</div> <div>Tel. : +49 8684 18-0 Email : info@rosenberger.de</div> <div>Page 3 / 3</div>								Draft	Date	Approved	Date	Rev.	Engineering change number	Name	Date	Marcel Panicke	07.06.16	Herbert Babinger	19.10.17	d00	17-s336	M. Knoll	19.10.17
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