Interface
According to IEC 61169-4, EN 122190, DIN 47223

Documents
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

<table>
<thead>
<tr>
<th>Connector parts</th>
<th>Material</th>
<th>Plating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Center conductor</td>
<td>CuBe</td>
<td>Gold, min. 1.27 µm, over nickel</td>
</tr>
<tr>
<td>Outer conductor</td>
<td>Brass</td>
<td>Flash white bronze over silver(e.g. Optargen®)</td>
</tr>
<tr>
<td>Body</td>
<td>Brass</td>
<td>powder coated</td>
</tr>
<tr>
<td>Dielectric</td>
<td>PP</td>
<td></td>
</tr>
<tr>
<td>Substrate</td>
<td>Al2O3</td>
<td></td>
</tr>
</tbody>
</table>
## Electrical data

**Frequency range**
DC to 6 GHz

**Open**
- **Return loss**: \( \leq 0.15 \text{ dB}, \text{ DC to } 6 \text{ GHz} \)
- **Error from nominal phase\(^1\)**: \( \leq 3.0^\circ, \text{ DC to } 6 \text{ GHz} \)

**Short**
- **Return loss**: \( \leq 0.15 \text{ dB}, \text{ DC to } 6 \text{ GHz} \)
- **Error from nominal phase\(^2\)**: \( \leq 3.0^\circ, \text{ DC to } 6 \text{ GHz} \)

**Load**
- **Return loss**: \( \geq 40 \text{ dB}, \text{ DC to } 2.5 \text{ GHz} \)
- **Return loss**: \( \geq 38 \text{ dB}, 2.5 \text{ GHz to } 6 \text{ GHz} \)
- **DC-Resistance**: \( 50 \text{ }\Omega \pm 0.5 \text{ }\Omega \)
- **Power handling**: \( \leq 1.0 \text{ W} \)

\(^1\) The nominal phase is defined by the Offset Delay, the Offset Loss and the Fringing Capacitances

\(^2\) The nominal phase is defined by the Offset Delay, the Offset Loss and the Short Inductance

## Mechanical data

- **Mating cycles**: \( \geq 500 \)
- **Maximum torque**: 30 Nm
- **Recommended torque**: 2.26 Nm
- **Gauge**: 1.77 mm to 2.07 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.

**Open**
- **Offset \(Z_0\) / Impedance / \(Z_0\)**: 50 \(\Omega\)
- **Offset Delay**: 87.394 ps
- **Length (electrical) / Offset Length**: 26.20 mm
- **Offset Loss**: 0.50 \(\text{G} \Omega / \text{s}\)
- **Loss**: 0.0076 \(\text{dB/ } \sqrt{\text{GHz}}\)
- **Fringing Capacitances**
  - \(C_0 = 177.000 \times 10^{-15} \text{ F} / 177.000 \text{ fF}\)
  - \(C_1 = 7200.00 \times 10^{-27} \text{ F/Hz} / 7.20000 \text{ fF/Hz}\)
  - \(C_2 = -3300.00 \times 10^{-36} \text{ F/Hz}^2 / -3.30000 \text{ fF/Hz}^2\)
  - \(C_3 = 386.000 \times 10^{-45} \text{ F/Hz}^3 / 0.38600 \text{ fF/Hz}^3\)
Technical Data Sheet

7-16 Calibration Kit Jack

60K36R-MSON3

Short
Offset \( Z_0 \) / Impedance / \( Z_0 \)  50 \( \Omega \)
Offset Delay  96.734 ps
Length (electrical) / Offset Length  29.00 mm
Offset Loss  0.50 G\( \Omega \)/s
Loss  0.0084 dB/\( \sqrt{\text{GHz}} \)
Short Inductance
\( L_0 = 0.0000 \times 10^{-12} \text{ H} \) / 0.0000 pH
\( L_1 = 0.0000 \times 10^{-24} \text{ H/Hz} \) / 0.0000 pH/\( \text{GHz} \)
\( L_2 = 0.0000 \times 10^{-33} \text{ H/Hz}^2 \) / 0.0000 pH/\( \text{GHz}^2 \)
\( L_3 = 0.0000 \times 10^{-42} \text{ H/Hz}^3 \) / 0.0000 pH/\( \text{GHz}^3 \)

Load
Offset \( Z_0 \) / Impedance / \( Z_0 \)  50 \( \Omega \)
Offset Delay  0.0000 ps
Length (electrical) / Offset Length  0.000 mm
Offset Loss  0.00 G\( \Omega \)/s
Loss  0.0000 dB/\( \sqrt{\text{GHz}} \)

Environmental data
Operating temperature range\(^3\)  0 °C to +50 °C
Storage temperature range  -55 °C to +90 °C
RoHS compliant

Declaration of documentation
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 & Schwarz and Anritsu compatible VNA format.

Inspection interval
Recommendation 12 months

Packing
Standard  1 pce in bag
Weight  310 g/pce

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.

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\(^3\) Temperature range over which these specifications are valid.

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