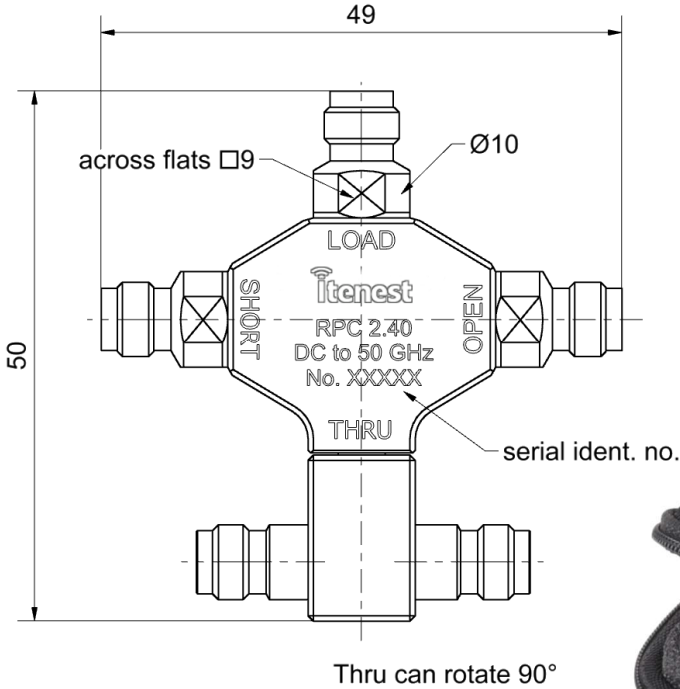
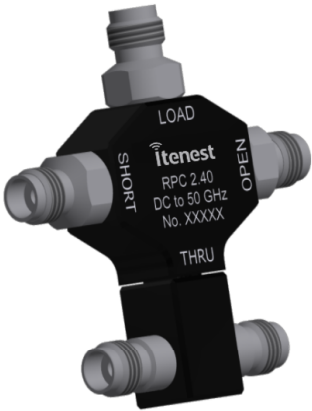


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RF_35/09:14/6.2

Technical Specification																				
RPC-2.40	Calibration Kit Jack	MCK50A-F																		
  																				
All dimensions are in mm; tolerances according to ISO 2768 m-H																				
Interface According to IEC 61169-40 Mechanically compatible with RPC-1.85																				
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 - Hard Shell Case - Protection Caps																				
Material and plating <table><tr><td>Connector parts</td><td>Material</td><td>Plating</td></tr><tr><td>Center conductor</td><td>CuBe</td><td>Gold, min. 1.27 μm, over nickel</td></tr><tr><td>Outer conductor</td><td>Stainless steel</td><td>Passivated</td></tr><tr><td>Body</td><td>Aluminum</td><td>black anodized</td></tr><tr><td>Dielectric</td><td>PS</td><td></td></tr><tr><td>Substrate</td><td>Al₂O₃</td><td></td></tr></table>			Connector parts	Material	Plating	Center conductor	CuBe	Gold, min. 1.27 μm, over nickel	Outer conductor	Stainless steel	Passivated	Body	Aluminum	black anodized	Dielectric	PS		Substrate	Al ₂ O ₃	
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iTest Technology Co.,Ltd. 5C Building 1, Tingwei Industrial Park, No.6 Liufang Road, Area 67, Xingdong community, Xin'an street, Bao'an District, Shenzhen,China. Tel:+86-755-2153 5646 www.itenest.com		Page 1 / 3																		

Technical Specification

RPC-2.40

Calibration Kit
Jack**MCK50A-F****Electrical data**

Frequency range DC to 50.0 GHz

Thru

Return loss

- ≥ 30 dB, DC to 4 GHz
- ≥ 24 dB, 4 GHz to 26.5 GHz
- ≥ 17 dB, 26.5 GHz to 50 GHz

Open

Error from nominal phase¹

- ≤ 2.0°, DC to 4 GHz
- ≤ 4.0°, 4 GHz to 26.5 GHz
- ≤ 6.0°, 26.5 GHz to 50.0 GHz

Short

Error from nominal phase²

- ≤ 1.5°, DC to 4 GHz
- ≤ 3.0°, 4 GHz to 26.5 GHz
- ≤ 4.5°, 26.5 GHz to 50.0 GHz

Load

Return loss

- ≥ 36.0 dB, DC to 4 GHz
- ≥ 30.0 dB, 4 GHz to 26.5 GHz
- ≥ 22.0 dB, 26.5 GHz to 50.0 GHz

DC Resistance 50 Ω ± 0.5 Ω

Power handling (at 25 °C, sea level) ≤ 0.5 W, derated linearity by 0.005 W/K

¹ The nominal phase is defined by the Offset Delay, the Offset Loss and the Fringing Capacitances² The nominal phase is defined by the Offset Delay, the Offset Loss and the Short Inductance**Mechanical data**

Mating cycles ≥ 500

Maximum torque 1.65 Nm

Recommended torque 0.90 Nm

Gauge 0.00 mm to 0.05 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 Z₀ / Impedance / Z₀ 50 Ω

Offset Delay 87.394 ps

Length (electrical) / Offset Length 26.20 mm

Offset Loss 4.00 GΩ/s

Loss 0.0304 dB/√GHz

Line Loss @ 1GHz 0.0012 dB/mm

Open

Offset Z₀ / Impedance / Z₀ 50 Ω

Offset Delay 23.350 ps

Length (electrical) / Offset Length 7.00 mm

Offset Loss 3.20 GΩ/s

Loss 0.0130 dB/√GHz

Fringing Capacitances

C ₀ = 4.30000 × 10 ⁻¹⁵ F	/	4.30000 fF
C ₁ = -718.000 × 10 ⁻²⁷ F/Hz	/	-0.71800 fF /GHz
C ₂ = 28.7000 × 10 ⁻³⁶ F/Hz ²	/	0.02870 fF /GHz ²
C ₃ = -0.30000 × 10 ⁻⁴⁵ F/Hz ³	/	-0.00030 fF /GHz ³

Technical Specification

RPC-2.40

Calibration Kit
Jack**MCK50A-F****Short**

Offset Z_0 / Impedance / Z_0	50 Ω	
Offset Delay	23.350 ps	
Length (electrical) / Offset Length	7.00 mm	
Offset Loss	3.50 G Ω /s	
Loss	0.0142 dB/ $\sqrt{\text{GHz}}$	
Short Inductance	$L_0 = 4.00000 \times 10^{-12} \text{ H}$	/ 4.00000 pH
	$L_1 = 0.00000 \times 10^{-24} \text{ H/Hz}$	/ 0.00000 pH/GHz
	$L_2 = 0.00000 \times 10^{-33} \text{ H/Hz}^2$	/ 0.00000 pH/GHz ²
	$L_3 = 0.00000 \times 10^{-42} \text{ H/Hz}^3$	/ 0.00000 pH/GHz ³

Load

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

Environmental data

Operating temperature range ³	+20 °C to +26 °C
Rated temperature range of use ⁴	0 °C to +50 °C
Storage temperature range	-40 °C to +85 °C
RoHS	compliant

³ Temperature range over which these specifications are valid.⁴ This range is underneath and above the operating temperature range, within the calibration kit is fully functional and could be used without damage**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.

Inspection interval

Recommendation	12 months
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Packing

Standard	1 pce in bag
Weight	36.3 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.

Rev.	Date
c00	06.09.18

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Page

3 / 3