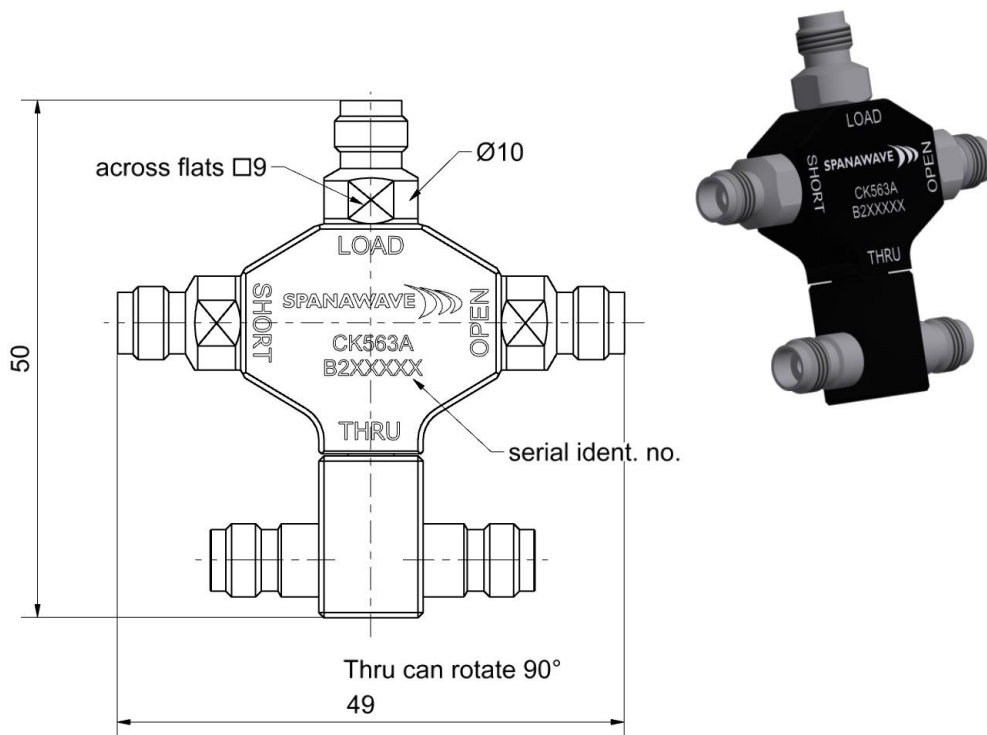


**CK563A:** 4-in-1 OSLT Calibration Kit, DC to 50 GHz, 2.4 mm (f)



**Interface**

According to 2.4 mm (f)  
 Mechanically compatible with 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**

**Material and plating**

**Connector parts**  
 Center conductor  
 Outer conductor  
 Body  
 Dielectric  
 Substrate

<b>Material</b>	<b>Plating</b>
Beryllium copper	Gold, min. 1.27 µm, over nickel
Stainless steel	Passivated
Aluminum	black anodized
PS	
Al <sub>2</sub> O <sub>3</sub>	

## CK563A: 4-in-1 OSLT Calibration Kit, DC to 50 GHz, 2.4 mm (f)

### Electrical data

Frequency range	DC to 50.0 GHz
<b>Thru</b>	
Return loss	$\geq 30$ dB, DC to 4 GHz $\geq 24$ dB, 4 GHz to 26.5 GHz $\geq 17$ dB, 26.5 GHz to 50 GHz
<b>Open</b>	
Error from nominal phase <sup>1</sup>	$\leq 2.0^\circ$ , DC to 4 GHz $\leq 4.0^\circ$ , 4 GHz to 26.5 GHz $\leq 6.0^\circ$ , 26.5 GHz to 50.0 GHz
<b>Short</b>	
Error from nominal phase <sup>2</sup>	$\leq 1.5^\circ$ , DC to 4 GHz $\leq 3.0^\circ$ , 4 GHz to 26.5 GHz $\leq 4.5^\circ$ , 26.5 GHz to 50.0 GHz
<b>Load</b>	
Return loss	$\geq 36.0$ dB, DC to 4 GHz $\geq 30.0$ dB, 4 GHz to 26.5 GHz $\geq 22.0$ dB, 26.5 GHz to 50.0 GHz
DC Resistance	$50 \Omega \pm 0.5 \Omega$
Power handling	$\leq 0.5$ W, derate by 0.005 W/K

<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	$\geq 500$
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 behavior 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	87.394 ps
Length (electrical) / Offset Length	26.20 mm
Offset Loss	4.00 G $\Omega$ /s
Loss	0.0304 dB/ $\sqrt{\text{GHz}}$
Line Loss @ 1GHz	0.0012 dB/mm

#### Open

Offset $Z_0$ / Impedance / $Z_0$	50 $\Omega$
Offset Delay	23.350 ps
Length (electrical) / Offset Length	7.00 mm
Offset Loss	3.20 G $\Omega$ /s
Loss	0.0130 dB/ $\sqrt{\text{GHz}}$
Fringing Capacitances	$C_0 = 4.30000 \times 10^{-15} \text{ F} \quad / \quad 4.30000 \text{ fF}$ $C_1 = -718.000 \times 10^{-27} \text{ F/Hz} \quad / \quad -0.71800 \text{ fF /GHz}$ $C_2 = 28.7000 \times 10^{-36} \text{ F/Hz}^2 \quad / \quad 0.02870 \text{ fF /GHz}^2$ $C_3 = -0.30000 \times 10^{-45} \text{ F/Hz}^3 \quad / \quad -0.00030 \text{ fF /GHz}^3$

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### Short

Offset $Z_0$ / Impedance / $Z_0$	50 $\Omega$
Offset Delay	23.350 ps
Length (electrical) / Offset Length	7.00 mm
Offset Loss	3.50 G $\Omega$ /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 <sup>2</sup> $L_3 = 0.00000 \times 10^{-42} \text{ H/Hz}^3$ / 0.00000 pH/GHz <sup>3</sup>

### 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 <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 specifications are valid.

<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.

### Includes

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.

### Calibration interval

Recommendation	12 months
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### Packing

Standard	1 per bag
Weight	1.16 oz

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