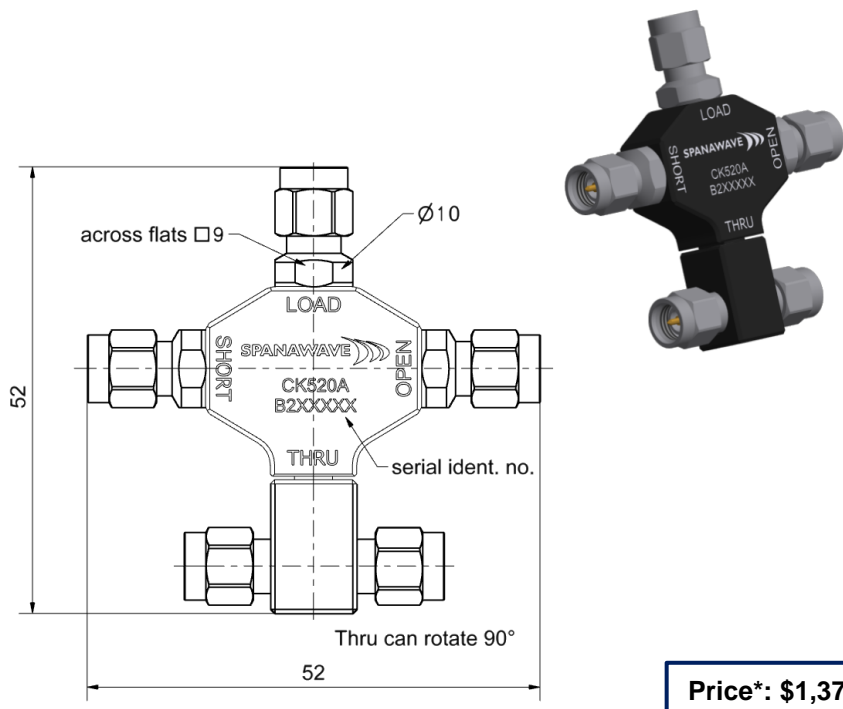**CK520A:** 4-in-1 OSLT Calibration Kit, DC to 26.5 GHz, Type-3.5 mm (m) 50 Ohm

Price*: $1,375.00

Interface
According to	3.5 mm (m)
Mechanically compatible with	2.92 mm and SMA

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	Material	Plating
Center conductor	Beryllium copper	Gold, min. 1.27 µm, over nickel
Outer conductor	Stainless steel	Passivated
Coupling nut	Stainless steel	Passivated
Body	Aluminum	black anodized
Dielectric	PS	
Substrate	Al_2O_3	

*Prices are for US customers only. International prices may differ based on region.

Technical Data Sheet

SPANAWAVE

CK520A: 4-in-1 OSLT Calibration Kit, DC to 26.5 GHz, Type-3.5 mm (m) 50 Ohm

Electrical data
Frequency range   DC to 26.5 GHz

Thru
Return loss $\geq$ 34 dB, DC to 4 GHz
                                                         $\geq$ 32 dB, 4 GHz to 8 GHz
                                                         $\geq$ 30 dB, 8 GHz to 26.5 GHz

Open
Error from nominal phase[1] $\leq$ 1.0°, DC to 4 GHz
                                                         $\leq$ 2.0°, 4 GHz to 8 GHz
                                                         $\leq$ 3.0°, 8 GHz to 26.5 GHz

Short
Error from nominal phase[2] $\leq$ 1.0°, DC to 4 GHz
                                                         $\leq$ 2.0°, 4 GHz to 8 GHz
                                                         $\leq$ 3.0°, 8 GHz to 26.5 GHz

Load
Return loss $\geq$ 40.0 dB, DC to 4 GHz
                                                         $\geq$ 35.0 dB, 4 GHz to 8 GHz
                                                         $\geq$ 30.0 dB, 8 GHz to 26.5 GHz
DC Resistance   50 $\Omega \pm$ 0.5 Ω
Power handling $\leq$ 0.5 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   1.70 Nm
Recommended torque   0.90 Nm
Gauge   0.00 mm to 0.08 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_o / Impedance / Z_o 50 Ω
Offset Delay   84.058 ps
Length (electrical) / Offset Length   25.20 mm
Offset Loss   2.51 GΩ/s
Loss   0.0183 dB/$\sqrt{\text{GHz}}$
Line Loss @ 1GHz   0.0007 dB/mm

Open
Offset Z_o / Impedance / Z_o 50 Ω
Offset Delay   33.356 ps
Length (electrical) / Offset Length   10.00 mm
Offset Loss   2.20 GΩ/s
Loss   0.0127 dB/$\sqrt{\text{GHz}}$
Fringing Capacitances $C_0 = -17.000 \times 10^{-15}$ F   /   -17.000 fF

                                                         $C_1 = -2000.0 \times 10^{-27}$ F/Hz   /   -2.0000 fF /GHz

                                                         $C_2 = 147.00 \times 10^{-36}$ F/Hz^2 /   0.1470 fF /GHz^2

                                                         $C_3 = -3.0000 \times 10^{-45}$ F/Hz^3 /   -0.0030 fF /GHz^3

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CK520A: 4-in-1 OSLT Calibration Kit, DC to 26.5 GHz, Type-3.5 mm (m) 50 Ohm

Short

Offset Z_o / Impedance / Z_o	50 Ω
Offset Delay	33.356 ps
Length (electrical) / Offset Length	10.00 mm
Offset Loss	2.36 GΩ/s
Loss	0.0127 dB/$\sqrt{\text{GHz}}$

Short Inductance				
	$L_0 =$	-39.000 x 10^{-12} H	/	-39.000 pH
	$L_1 =$	2200.0 x 10^{-24} H/Hz	/	2.2000 pH /GHz
	$L_2 =$	-150.00 x 10^{-33} H/Hz^2	/	-0.1500 pH /GHz^2
	$L_3 =$	3.0000 x 10^{-42} H/Hz^3	/	0.0030 pH /GHz^3

Load

Offset Z_o / Impedance / Z_o	50 Ω
Offset Delay	0.0000 ps
Length (electrical) / Offset Length	0.000 mm
Offset Loss	0.00 GΩ/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.

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

Packing

Standard	1 per bag
Weight	1.35 oz.

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