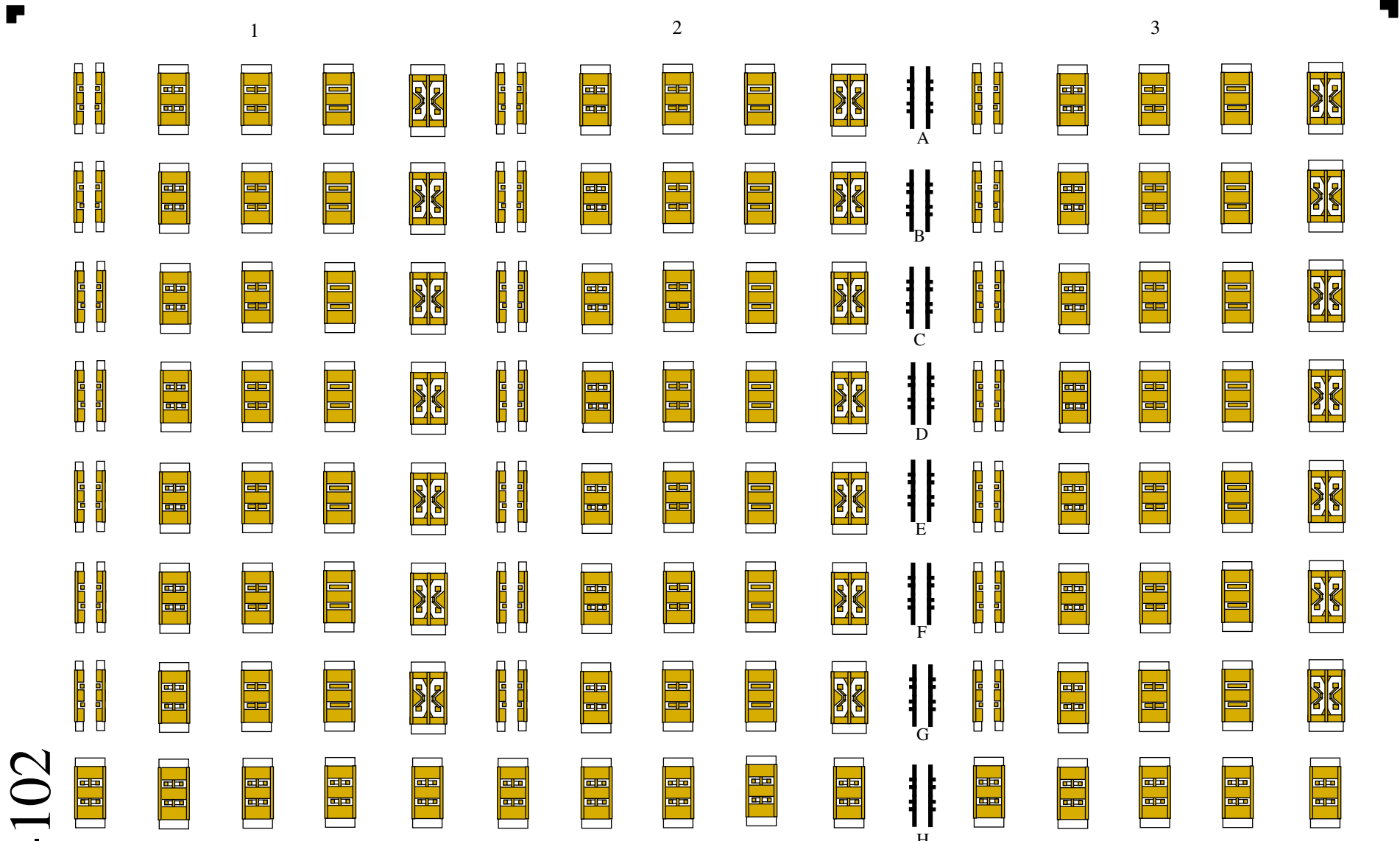


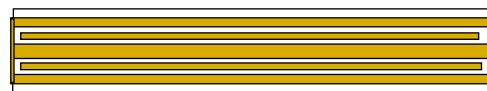
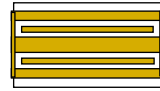
Impedance Standard Substrate

(Pitch: 150 μm , Configuration: GSGSG)

P/N: 126-102; S/N:



126-102

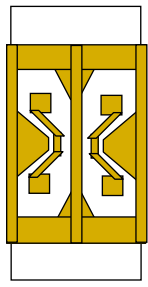
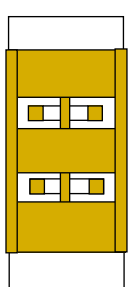
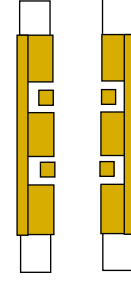
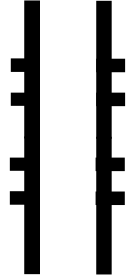
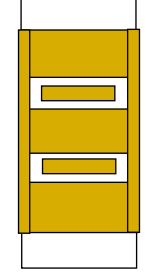
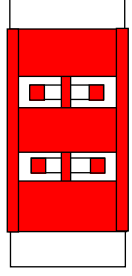
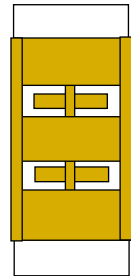


Cascade Microtech Inc.

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Key to the 126-102 Map

Substrate specifications: Material: Alumina; Thickness:25 mils (635 um); Dielectric constant: 9.9

	<p>Thru delay: 2.5ps</p>		<p>Note:</p> <p>Ensure the bias supply is turned off during calibration. Applying bias to the probe during calibration could cause the resistance of the load to change</p>		
<p>Loop Back Thru</p>		<p>Load</p>	<p>Row H is exclusively loads so as to maximize the number of usable sites.</p>	<p>Open</p>	
	<p>Thru delay: 2 ps</p> <p>Dimensions: Length: 325 μm</p>		<p>For optimum calibration accuracy only the Red -marked load standards should be used</p>		<p>A-H Alignment Marks</p> <p>See below for more information on alignment marks.</p>
<p>Straight Thru</p>		<p>Precision 50 Ω Load</p>	<p>DC accuracy: +/- 0.3 %</p>	<p>Short</p>	

	Verification Lines (from left to right)				
Thru Delay (ps)	27	7	14	3	40
Length (um)	3500	900	1800	450	5250

	Overtravel
ACP	75 - 100 um
Infinity	50 - 75 um

All of the above specifications are based on the recommended overtravel (downward movement of probe after initial touchdown on the substrate) listed above. This amount of overtravel can be set before calibration on the Impedance Standard Substrate (ISS) using the alignment marks (allows precise setting of probe separation and overtravel). Figure 1 shows that initial contact with the edge of the probe tips should be made at reference plane X. The desired overtravel and thus skate (forward movement of probe tips after initial contact with substrate) is then achieved by adjusting the Z height on the positioner to move the edge of the probe tips to reference plane Y. This can also be seen from the photographic images shown in Figure 2.

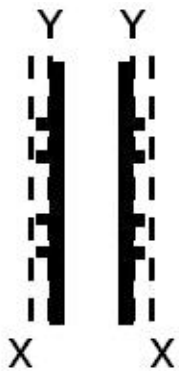


Figure1: Alignment Marks

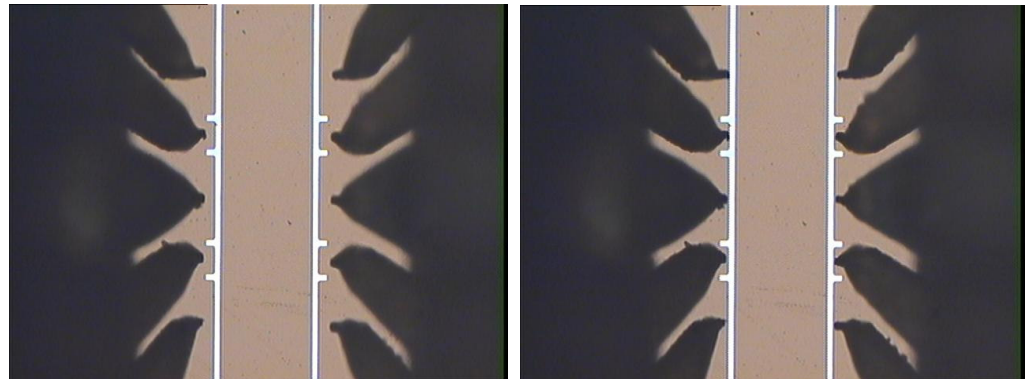


Figure2: Images showing correct alignment and placement of probe tips

Calibration Coefficients – coefficients are supplied for two, three and four port calibrations. Please refer to the probe specifications for performance limits.

Pitch (um)	ACP									Pitch (um)	Infinity					
	SGS, GS or SG			GSG or GSGSG			GS ₁ GS ₂ or S ₂ GS ₁ G				SGS, GS or SG			GSG or GSGSG		
	C-Open	L-Short	L-Term	C-Open	L-Short	L-Term	C-Open	L-Short	L-Term		C-Open	L-Short	L-Term	C-Open	L-Short	L-Term
150	4.2	57.3	27.9	4.1	49.6	18.7	S ₁ =4.1 S ₂ =4.2	S ₁ =49.6 S ₂ =57.3	S ₁ =18.7 S ₂ =27.9	150	3.1	48.9	22.3	4.1	49.6	18.7

Note 1: Units for C-Open = fF, L-Short = pH, L-Term = pH

Please see the Cascade Microtech web site for further information on this and other ISS: <http://www.cmico.com>.

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