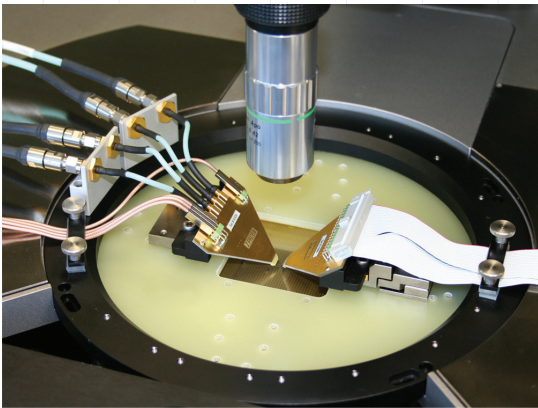


Cascade Microtech, Inc.

SPECIFICATION SHEET



Flexible, cost-effective RF and high-speed digital production test

|Z| PROBE® CARD

High-frequency Probe Card

For both RF and high-speed digital devices, the |Z| Probe Card is the ultimate probing technology for production-floor test. It is the first and only probe card that integrates the unique, MEMS manufactured contact technology of the |Z| Probe. As a result the |Z| Probe Card offers a typical lifetime of 1,000,000 touchdowns, which significantly decreases cost of ownership.

The |Z| Probe Card can be easily and inexpensively repaired. Since the design of the |Z| Probe Card is modular, single probes can be replaced as needed. This means less downtime for you, saving you cost and reducing time to market.

Up to four |Z| Probes of any type can be integrated into the |Z| Probe Card in an NESW configuration. Standard or Dual |Z| Probes can be used for highly-accurate, scattering (s-) parameter measurements. If you prefer, the Multi |Z| Probe can be integrated for testing up to 16 RF signals per side, or RF and DC signals can be tested using one versatile probe card. The configuration of the |Z| Probe Card is completely up to you.

The |Z| Probe Card is available in a standard circular format for 200 mm or 300 mm probe systems. It can also be designed in other configurations down to the 4.5 inch probe card format for compatibility with other setups. The PCB carrier board is customizable to accommodate your testing requirements.

Each probe is mounted on a mini-manipulator on the PCB carrier board. These manipulators allow the probes to be aligned in X, Y and Z, and then fix the probe in a final position. Cascade Microtech offers a special alignment service to ensure exact positioning of the probes for your requirements.

In conjunction with the BlueRay™ probe system from Cascade Microtech, you have a powerful, high-throughput RF test platform. Cascade Microtech also has a complete line of CSR Calibration Substrates, the industry standard in accuracy, which can be configured for production floor test requirements. In addition, SussCal® Calibration Software automates calibration routines and provides critical measurement tools for measuring calibration accuracy and performance. Altogether, you have a complete RF production test solution from one supplier.

FEATURES AND BENEFITS

Accurate multiport measurements	Extremely low contact resistance
	Independent nickel contacts provide superior contact reliability and self-cleaning on Al pads
	Full impedance control for minimum radiation loss and crosstalk
Cost-effectiveness	Low cost of ownership thanks to long lifetime
	Repairable – just replace the probe
Flexibility	Up to 64 RF channels per probe card possible
	Mixed-signal RF/DC testing
	Integrated DC bias lines available
	Custom elements and matched circuits can be placed near to DUT
Durability	Simple re-configuration for different setups
	Incredibly long lifetime (> 1,000,000 touchdowns)
	Safe, stable and repeatable contact with minimal overtravel
	Air isolated CPW provides high-thermal stability

SPECIFICATIONS*

Format	
Ring	200 mm or 300 mm
Card	4.5 inch or 6 inch (others on request)
Compatible Probes	
Z Probe	Single-ended RF test up to 50 GHz
Dual Z Probe	Differential RF test up to 40 GHz
Multi Z Probe	Multi-port RF and digital test up to 25 GHz
	Mixed DC/RF testing
Contact springs	Nickel
Contact cycles on Al	> 1,000,000
Mini-Manipulator	
Travel range (X/Y/Z)	1 mm**
Resolution	15 µm**

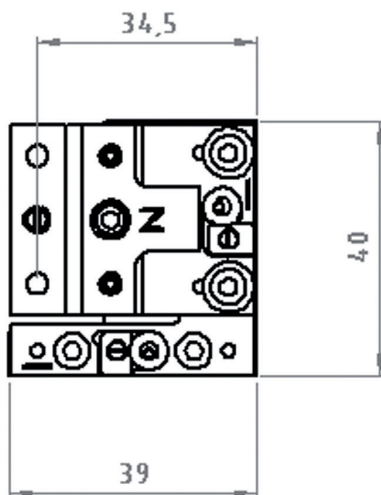
* Data, design and specification depend on individual process conditions and can vary according to equipment configurations.

Not all specifications may be valid simultaneously.

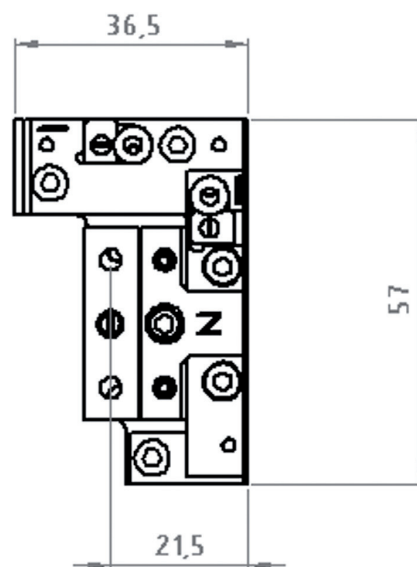
**Probe card alignment tools are necessary for final positioning.

PHYSICAL DIMENSIONS

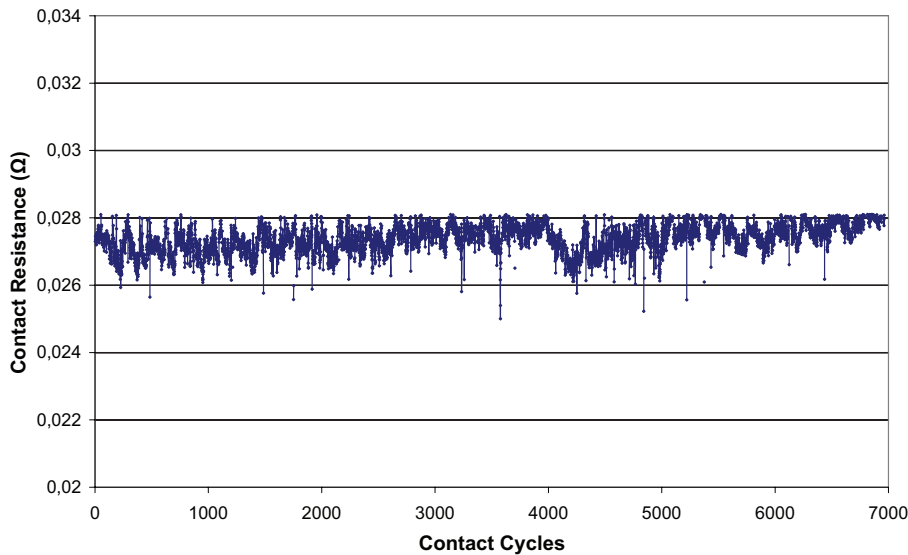
Footprint (all dimensions in mm)



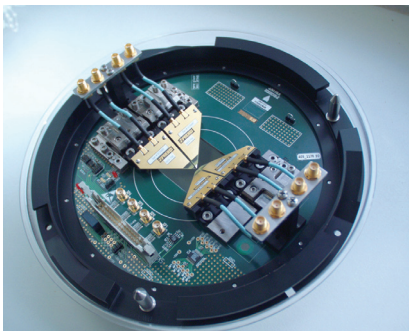
Standard



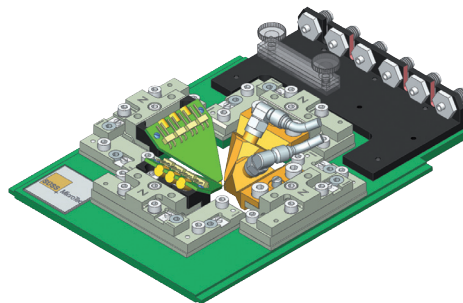
Compact



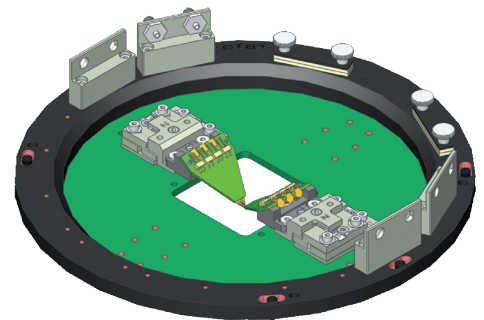
Behavior of contact repeatability with |Z| Probe



The |Z| Probe Card can be specially designed for different test equipment adaptations.



The |Z| Probe Card is also available in standard 4.5" format.



Round |Z| Probe Card for standard Cascade Microtech probe stations.

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Data subject to change without notice

ZProbeCard-SS-1011

Cascade Microtech, Inc.
 toll free: +1-800-550-3279
 phone: +1-503-601-1000
 email: cmj_sales@cmicro.com

Cascade Microtech GmbH
 phone: +49-811-60005-0
 email: cmg_sales@cmicro.com

Cascade Microtech Japan
 phone: +81-3-5615-5150
 email: cmj_sales@cmicro.com

Cascade Microtech Shanghai
 phone: +86-21-3330-3188
 email: cmc_sales@cmicro.com

Cascade Microtech Singapore
 phone: +65-6873-7482
 email: cms_sales@cmicro.com

Cascade Microtech Taiwan
 phone: +886-3-5722810
 email: cmt_sales@cmicro.com