

Probe Card Equipment

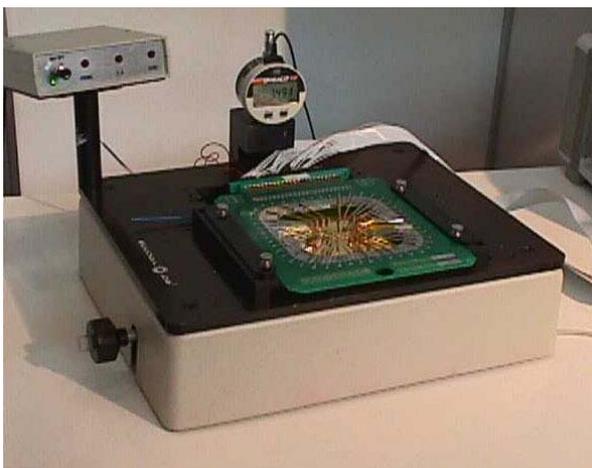
CARD ASSEMBLY MACHINE

The PCAM Probe Card Assembly Machine provides a convenient and economical capability to assemble a wide range of fixed pattern probe cards. Accuprobe has applied a clean functional design approach that provides maximum utility and uncompromising precision. The PCAM-100 allows a wide range of motion for the precise manipulation of the probes allowing probe placement not only for perimeter contact pads but also on the more difficult devices with complex internal contact pad locations.

The PCAM-100 is a general-purpose machine intended for all standard probe cards up to 6.5 inches in width including standard rectangular and round probe cards. For rectangular probe cards, the PCAM-100 will accommodate both standard (S, M, L, XL, XXL) and non-standard centers of rotation.

Accuprobe's card assembly machines offer coarse and fine micrometer motion of all controls associated with the probe manipulator stage. The microscope mount and slide mechanism is unique and incorporates a recirculating ball bushing to provide complete movement over the surface of the probe card. This range of motion permits visual inspection not only of the probe contact array but also the entire surface of the card.

A selection of one probe gripper is supplied with each machine. The Z-Grip-1 is intended for use with Z adjustable probes. The B-Grip-1 is intended for use with blade probes (either Metal or Ceramic blades) and is typically used with smaller blade profiles for wafer probing. Another blade gripper, B-Grip-2 is intended for use with larger blade probes



PTS-100



PCAM-100

that are typically used in hybrid circuit applications. Each Probe Card Assembly Machine is supplied with an alignment card that is used when setting up for a new card assembly.

PLANARIZATION TEST STATION

The PTS-100 is a precision instrument used to set the planarization depth of the probes on a probe card and is the perfect solution for measuring and maintaining the planarity of probe cards to ± 5 microns. The precision Z stage uses high quality cross roller slides for extremely smooth and accurate Z motion. The cardholder is fully adjustable and will accommodate most probe card configurations. Measurements are made with a digital linear gauge which provides a bright, easy to read display in either inches or millimeters. The gauge has a zero reset and has a data port for an external PC connection.

A precision calibration plate is included with the PTS-100 and is for checking or verifying the surface of the PTS chuck in relation to the cardholder.

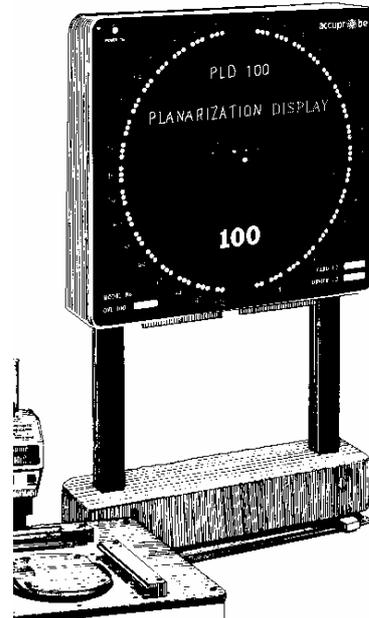
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PLANARIZATION LIGHT DISPLAY

The PLD-100 planarization display provides a convenient method to monitor probe contact when measuring or adjusting the probe planarization of a probe card assembly. The display significantly enhances the planarization maintenance aspect of probe card care by allowing the user to visually verify the simultaneous contact of all probes to the reference plane and quickly identify high or low probes.

The PLD-100 also includes a unique variable beep-rate audible continuity checker. This troubleshooter can be used to detect shorts and opens and to identify conductive contamination that could result in leakage and corrupt test results. The PLD-100 has a large display area that can display 144 probes in a radial array. Each PLD is supplied with a choice of one display overlay and a matching probe card interface cable that corresponds to the probe card edge connector. Other overlays and interface cables can be ordered separately.



PLD-100

PCAM SPECIFICATIONS

Microscope	Stereo Zoom Nikon SMZ645
Microscope Mount	Full motion sweep
Illumination	Fluorescent ring light
Power	110-120 VAC 60 Hz or 220-240 VAC 50 Hz
Vacuum Chuck Size	3 inches
Chuck Motion	X,Y,Z=.5 inches
Theta	360°
Vacuum Required	5 CFM @ 10 inch Hg
Manipulation Arm	45 Degrees Swing
Manipulator Travel	X=4.5 inches Y=6.5 inches Z=.5 inches
Probe Angle Swing	30 Degrees
Probe Fine Z	Z=.5 inches

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