SEMIPROBE®
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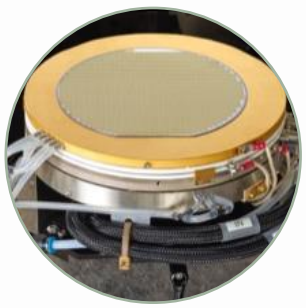
SUCCESSFUL APPLICATION: DEVICE CHARACTERIZATION - 1221



Specific Requirements:

The customer required a highly configurable 200 mm semi-automatic probe system for device characterization that would interface to a Keysight B15000 and be controlled via EasyExpert software. It had to operate from -60 °C to 200 °C, providing the ability to make multiple types of measurements – low leakage, low capacitance, low voltage, and low resistance as well as high frequency. High magnification optics to see features in the micron range were required.

SemiProbe Solution:

- PS4L SA-8 semi-automatic 200 mm probe system:
  - 200 mm programmable X,Y,Z and theta stage
  - 200 mm, gold plated triaxial thermal chuck with vacuum holes – operating from -60 °C to 200 °C, mounted to a large travel load-stroke for easy device loading and unloading
  - PC/Monitor, GPIB, and PILOT Software Suite (Navigator, Wafer Map, Autoalign)
  - TMC vibration isolation table with casters, leveling feet and keyboard/monitor rack
- Localized environmental chamber with top-hat to provide frost-free, dark and EMI shielding
- Large aluminum platen with stainless steel skin, removable front wedge, and a platen lift
- Second recessed platen for the additional Imina Technologies miBot nanopositioners
- Integrated microscope:
  - Compound microscope bridge with a 50 mm x 50 mm x 80 mm X, Y, Z travel
  - Compound microscope with 2x, 10x, 20x, 50x and 100x objectives
  - CCTV System with a color camera, color monitor, c-mount camera adapter
- Programmable and manual manipulators:
  - Four programmable three-axis manipulators with coaxial and triaxial probe arms
  - Four manual manipulators with coaxial, triaxial, and Kelvin probe arms
  - One manipulator with contact sense probe
  - Assorted boxes of tungsten probe tips (12.5 µm, 7 µm, 1 µm, and 0.1 µm radius)