



# SEMIPROBE®

Test • Inspect • Innovate

## SUCCESSFUL APPLICATION: MEMS - 0415



### Specific Requirements:

The customer wanted to test 200 mm silicon MEMS wafers under vacuum and at low and high temperatures (-60 °C to 200 °C). They wanted the ability to use probe cards as well as programmable manipulators with DC and High Frequency (HF) probe arms. The system needed the ability to interface to a variety of Keithley and Keysight test instrumentation. The microscope bridge had to support optics, black bodies and a Polytec MEMS motion analyzer.

### SemiProbe Solution:

- SA-8 Semi-automatic 200 mm probe system:
  - 200 mm programmable X, Y, Z and theta stage
  - PILOT Software Suite – Navigator, Wafer Map, Autoalign and programmable manipulator modules
  - Vibration isolation table
- Large vacuum chamber:
  - Removable top- and front-loading door for easy loading and unloading of devices
  - All Components in the vacuum chamber rated to  $10^{-6}$  torr
  - Agilent turbo-molecular vacuum pump
- Thermal chuck system that operates from -60 °C to 200 °C
- Large microscope gantry for the simultaneous mounting of optics, black bodies and motion analyzer
- Compound optics with CCTV system
- Programmable manipulators and probe cards:
  - Four programmable three-axis manipulators with DC and HF probe arms, cables and probes
  - Probe card holder – 4.5” cards
- Integrated with Keithley Instruments 4200 Parametric Analyzer