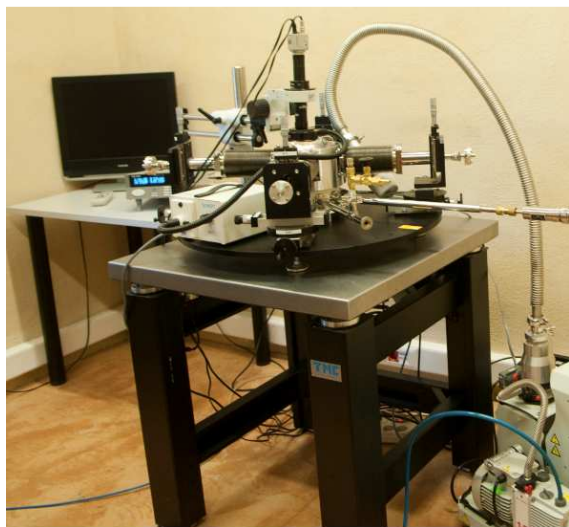


VARIABLE TEMPERATURE WAFER PROBER



MODEL: Janis ST-500-2(4CX)

INSTALLATION PLACE: Low temperature Electrical Characterization Laboratory (room No15 new-building), Department of Microelectronics

DESCRIPTION:

The Janis ST-500-2 probe station, with the current configuration, enables the study of dc/low frequency electrical properties of structures and devices at wafer level, within the temperature range of 5 to 475 K.

SPECIFICATIONS

1. Model ST-500 continuous flow cryostat system. The cryostat includes a 80 mm diameter grounded that accommodates a 80 mm diameter wafer.
2. Two Si diode thermometers for active temperature control with a typical stability of 0.05 K in the entire temperature range.
3. Four independent probe stations, (for dc, low frequency measurements) mounted on X, Y, Z translation stages, providing 50 mm total travel along X-direction, 40 mm total travel along Y-direction and 18 mm total travel along Z-direction). Each stage is capable of an incremental translation of 10 microns.
4. Four single-tip coaxial probe-holders wired with flexible 50-Ohm coaxial cables to BNC feed-throughs.
5. Flexible cryogenic liquid transfer line that can be used either with LN or LH
6. Automatic temperature controller (Model 9700 Scientific Instruments)
7. Monoscope (Model Zoom 70XL) with 4.2 μm optical resolution, 7X zoom, 0.67X video tube, and a 150 W fiber-optic light source. The system includes Hitachi CCD camera, and Sharp 21" LCD color monitor.
8. Pumping station (Model TP-70-2), including a turbo-molecular pump with a back-up mechanical pump
9. Vibration isolation table with pneumatic isolators.

APPLICATIONS

1. Thin film conductivity measurements (Van der Pauw method)
2. Contact resistance measurements (TLM method)
3. Electrical measurements at wafer level of electronic devices such as resistors, diodes, MIS capacitors, bipolar transistors and FETs.
4. Electrical measurements at wafer level of sensors and MEMS.

CERTIFICATION/ACCREDITATION

The facility is not certified or accredited.

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