SEMICAPS-Technology Associates

SEMICAPS-Technology Associates specializes in the manufacture of Liquid Crystal Analysis Kit and Cross-Sectioning Kit accessories

Many yield and field failures involved excessive current flow; ESD, resistive gate shorts, conductor-to-conductor shorts are examples. Devices with local hot spots are less reliable, leading to early failures. Liquid crystal analysis kit 4300 provides an unsurpassed method to precisely identify points where heat is generated, down to 20mW. This non-destructive method enables an analyst to "see" hot spots through a probe station microscope with polarised light

Liquid Crystal Kits

Liquid crystal hot spot detection kit 4300 contains

- Complete illustrated procedure
- Liquid crystal A
- Syringes and spreading strips
- Switching module

Power devices or latch-up and second breakdown failures involved higher temperatures. Kit 4330 is similar to kit 4300 except additional Liquid Crystal B and C are provided. Liquid Crystal B and C have sensitivity at higher temperatures needed for these types of failures. These liquid crystals span the temperature range from 30 deg C to 100 deg C.

NMOS ASIC: ESD failure, dissipating 25mW, 20mm hot spot near a bond pad, located by LC kit
Precision Non-encapsulated Cross-Sectioning Kits

Industry proven non-encapsulated cross sectioning kits and accessories enable the inexperienced and experienced to routinely make superb precision cross sections for process and yield control, and for failure analysis. It is ideal for SEM analysis, simple enough for daily quality inspections, but precise enough for detailed analysis.

The kit 5115 with the new adjustable mounting fixture provides a fully adjustable cross section plane, within +/- 2 deg side to side. This capability makes routine cross sectioning easier than ever. For TEM analysis, this adjustable mounting fixture is needed to produce Specific Area Cross Section for TEM (SAXTEM) samples.

It is an unsurpassed method to precisely polish a multilayer sample structure to within 0.1mm of a desired location. Areas of application include the following:

- Small diodes to very large VLSI silicon
- Device chips
- Fiber optics
- GaAs device chips and wafer pieces
- Thin film - single and multiple layers consisting of metals, polycrystalline silicon, nitrides and polymides etc.