

S600 ULTRA LOW LEAKAGE PROBE CARDS DATA SHEET

Synergie CAD PSC is approved by KEITHLEY to manufacture S600 Ultra Low Leakage probe cards, including Blade and Coaxial Epoxy technology.



Ultra Low Leakage probe card manufactured and maintained by Synergie CAD Group, is the best way to enable all the capabilities of the tester by assuming an ideal interface between the wafer and the tester.

With the reduction of processed nodes, with the increase of the number of layers processed on the wafer and with the apparition of the copper on wafers, parametric tests is now a key point in the total test strategy.



Today the need is to measure very small residue of etching process, so low leakage capability is very important.

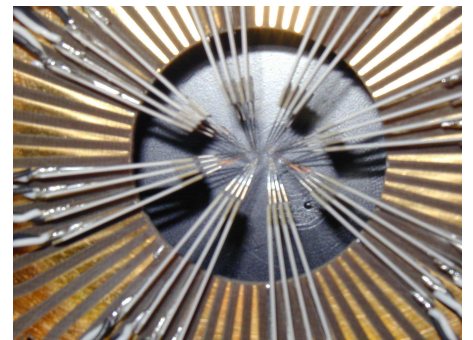
But the lower leakage has to be measured, the longer is the time. The probe card doesn't have to increase this time, that's why Grenoble Team develops and makes continuous improvement of its low leakage manufacturing process to offer, either, new capability and better performance.

As example, Synergie CAD manufactures its own specific strip line ceramic blades and coaxial epoxy needles to guarantee our specifications.

Synergie CAD is proud to announce that as a result of its efforts to develop new technologies, KEITHLEY give to the company the agreement to manufacture Ultra Low Leakage probe cards for S600 testers in all cantilever technologies available for the parametric test : Ceramic Strip Line Blades (since 2000), Coaxial Epoxy (since 2002).

As Synergie CAD is constantly listening to the needs of his customers, the high voltage application is now available to test automotive applications.

Synergie CAD also shares its experience and its know-how to manufacture parametric probe cards for other testers as Agilent, Suss Microtech, ReedHlom...



Web site: www.synergie-cad.fr www.synergie-cad-probe.fr

Your Contacts: jl.bosser@synergie-cad.fr

Or

info@synergie-cad-probe.fr

| SPECIFICATIONS | VALUES |
|--|---|
| <u>Probe Card</u> | |
| Typical Probe Card Depth (from Bottom) | 120-160 mils +/- 5 |
| Minimum Pitch | 80 μ m |
| Minimum Pad dimensions | 50 μ m |
| Tip position | in line |
| Number of probes | 1-64 |
| Probe position alignment accuracy | +/- 5 μ m |
| Operating temperature | -40 °C to 200 °C |
| Rotational specification | +/- 1 ° |
| Typical Overdrive | 3 mils |
| Typical touchdown | 250 000 to 1 000 000 |
| <u>Needles</u> | |
| Type | Strip line Ceramic Blades Coaxial Epoxy needles |
| Material | Copper Beryllium or Tungsten Rhenium |
| Tip diameter | 1 to 2 mils (25 to 50 μ m) |
| Tip length | 7 to 25 mils (175 to 625 μ m) |
| Planarity | +/- 5 μ m |
| <u>Pad specification</u> | |
| Material | Aluminum, Copper, Polysilicon, other... |
| Flatness between 2 pads | +/- 10 μ m |
| Probe mark dimensions | 30 to 60 μ m |
| <u>Electrical Specifications</u> | |
| Leakage : Pin to Ground , Pin to Pin 60238 - Low Leakage probe cards 60239 - Ultra Low Leakage Blade probe cards 60237 - Ultra Low Leakage Coax-Epoxy probe cards | 0.2 pA/V 1 fA/V 1 fA/V |
| Maximum current per pin (depending on material tested) | Depending on needle dimension and material from 300 mA to 1.5 A |
| High Voltage application | 1000 V |
| Typical parasitic capacitance | NA |
| Typical DC contact resistance (Probe) | 0.5 to 1 Ohm |
| Maximum DC contact resistance (Tip to Test equipment) | 2 Ohms +/- 1 |
| <u>PCB specification</u> | |
| Material | Polyimide, Pcb Kit provided and guaranteed by Keithley |
| Thickness 60237-60239 60238 | Double deck probe cards 3.2 mm with gold pins plugs |
| Components pre-mounted | ID EEPROM |

Ask for our special Order form to give us all data necessary for manufacturing.

Web site: www.synergie-cad.fr www.synergie-cad-probe.fr

Your Contacts: jl.bosser@synergie-cad.fr

Or

info@synergie-cad-probe.fr