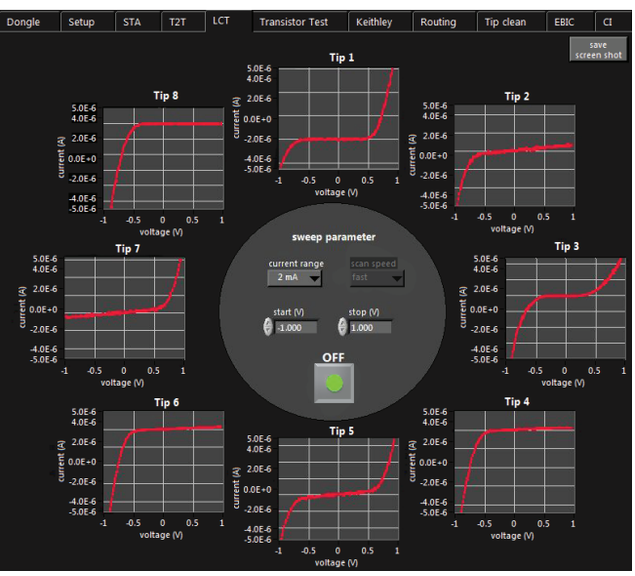
Live Contact Tester

Together with iProbe, the Live Contact Tester constitutes the core of the Advanced Probing Tools.

Achieving physical contact with the sample surface is a straightforward task. However, it is often difficult to confirm that the individual probe tips



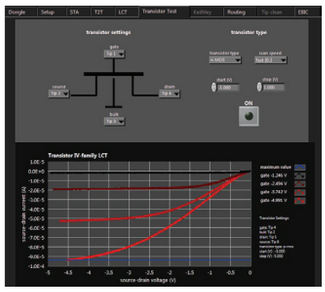
are in electrical contact with the device under test. Thin oxide layers or other contaminants can prevent good ohmic contact to the substrate.

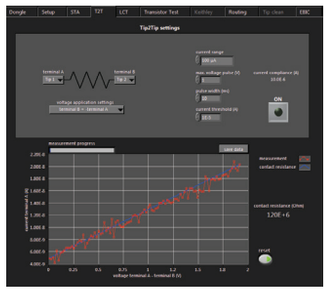
After initial touch down, the LCT provides a means for visualizing each tip's electrical status by simultaneously recording ten I-V-curves per second on each tip. Thus, the tips' electrical response to a given bias voltage can be seen in real-time. This allows the user to reposition the tip - without the use of the electron beam - until all tips are in contact with the desired points on the sample.

The LCT is augmented by two additional modules: the Tip2Tip tester (T2T) and the Transistor Test module.

The latter is used to optimize the probe tip's position on the gate contact. As the gate is not connected to bulk, this tip's contact can't be confirmed using the LCT's display. Rather, the Transistor Test Module is used to record an entire family of Ids vs. Vds curves ten times per second. Again, this yields live feedback on the gate contact quality.

The T2T module can be used to measure the resistance between two tips. This can be used e.g. to break through contaminating oxide layers on the tips.





Technical specifications

- Tip voltage range -10 to +10 V (16 bit DAC)
- Current range 100 µA to 2 mA
- Three predefined scan speeds

Further information

- Contact us at info@kleindiek.com
- Find your local agent at www.kleindiek.com

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