ASIC/IC - Debugging and Troubleshooting

Sub-micron probe station

At DELTA we have the competences and powerful tools to assist you in revealing why the ASIC/IC design does not work and locate the failure site. Possible causes of failure are ESD handling damages, ASIC/IC design errors or bad wafer processing.

Services

IC-debugging
- Hot spot analysis
- Line probing
- Line cuts - isolate circuits
- Leak current detection
- Leak current measurements

Probing
- Semi-automatic
- Wafer probing
- Probing by probe card
- Pad probing
- Line probing

Laser trimming
- Resistor trimming
- Capacitor trimming
- Fine trimming of thin-film
- Local depassivation
- Polyimide removal
- Micro-preparation of thin-film

Other
- FIB preparation
- Chip measurements
- Prototype assembly
- Wire bonding
- Etc., etc.

We help ideas meet the real world / ASIC.MADEBYDELTA.COM
Together with the equipment in our laboratory and the experience of our team, the ALESSI REL-6100 probe station, with laser and micropositioners, is a powerful tool when debugging any type of integrated circuits. The laser can open top glassivation for direct line probing and it can cut lines to bypass parts of the circuit. The probe station is also very suitable for detection of leak current by the use of liquid crystals, the so-called "Hot Spot Analysis".

### Technical details

<table>
<thead>
<tr>
<th>ALESSI REL-6100 probe station</th>
<th>Resolution</th>
<th>0.1 μm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work area</td>
<td>1 μm</td>
<td></td>
</tr>
<tr>
<td>Magnification</td>
<td>8 inch (200 mm)</td>
<td></td>
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<tr>
<td></td>
<td>20 - 1000X</td>
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<tr>
<td>Mitutoyo microscope</td>
<td>Speed</td>
<td>1 mm/sec.</td>
</tr>
<tr>
<td>2MS1 programmable micropositioners</td>
<td>Resolution</td>
<td>0.1 μm</td>
</tr>
<tr>
<td>2MH2-B manual micropositioners</td>
<td>Repeatability</td>
<td>1 μm</td>
</tr>
<tr>
<td>EzLaze</td>
<td>Resolution</td>
<td>1 μm</td>
</tr>
<tr>
<td>0.6 micron probe needles</td>
<td>Min. cut size</td>
<td>1x1 μm</td>
</tr>
<tr>
<td>Mounting of probe cards</td>
<td>Wavelength</td>
<td>532 nm / 2 mJ / 5 ns</td>
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<tr>
<td>Digital photos on cd or by e-mail</td>
<td>Pulse</td>
<td>355 nm / 2 mJ / 4 ns</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 Hz in 10 sec. or</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 Hz continues</td>
</tr>
</tbody>
</table>

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