Unaxis 770 Deep Si Etcher

Manager: Meredith Metzler  
Backup: Vince Genova

Work Phone  
Manager: 254-4934  
Backup: 254-4907

Safety
- No unusual hazards during normal operation
- No buddy system restrictions imposed on normal operation

Process Restrictions
Material Restrictions
- Whole 4" silicon wafers only
- Thermal Oxide mask or Photoresist mask only
- Photoresist mask: edge bead must be removed (5mm ring)
- No other polymers
- No metals exposed to etch
- No pieces glued or stuck to wafers - see manager about bonding wafer pieces

Parameter Restrictions
- Bosch etch process only
- ICP power less than 950 watts
- RF power less than 15 watts

Scheduling / Sign-up Restrictions
- Maximum 4 hour block reservations anytime
- Maximum 12 hours reserved in advance at any time per person
- No consecutive research group reservations or monopolization of the schedule by research groups
- Users/Groups may use any amount of unreserved time
- Additional individual restrictions may be imposed to maximize effective use

Requirements (Do Every Time)
- Check wafer orientation - flat toward rear on load arm
- You must remain in the laboratory near the instrument or have an authorized user designated to do so

Prohibitions (Never Do)
- No resist on backside of wafer
- Do not ABORT, use END STEP to move through process
- Do NOT attempt to change/remove wafer clamp !!!!

Common Problems

<table>
<thead>
<tr>
<th>Problem:</th>
<th>Root Cause:</th>
<th>Solution:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wafer tray not in lock</td>
<td>Wafer stuck to clamp</td>
<td>Remove edge bead from resist coated wafer. Notify manager</td>
</tr>
<tr>
<td>Plasma goes out after a number of cycles</td>
<td>Incorrect etch parameters</td>
<td>Notify manager</td>
</tr>
<tr>
<td>No response from keyboard</td>
<td>Software crashed</td>
<td>Reboot - follow written instructions</td>
</tr>
<tr>
<td>Helium flow out of compliance</td>
<td>Holes are etched through to backside</td>
<td>Alarm silence, Hold, End Step to stop process - unload wafer</td>
</tr>
<tr>
<td>Windows application error</td>
<td>Software crashed</td>
<td>Reboot - follow written instructions</td>
</tr>
</tbody>
</table>

Other Comments or Cautions

Calls to staff phones will be automatically forwarded to their cell phones during accessible hours. At other times leave a message or send them an email.

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