Procedure:

1. Select 10 samples from the job and move them to a plastic petri dish marked with the job and operation number.
2. Remove the electrode from the top and bottom surfaces. This is done manually using 400-grit SiC abrasive paper along with the fixture and gage pin specified on the Router. Be careful not to remove too much material, only enough to strip off the electrode.
3. Create a new version of worksheet CR038.
4. Select the correct crystal part number from the drop-down list and enter the job number by scanning the barcode.

NOTE: During the following testing process it is important to maintain serialization of the parts. Capacitance and thickness should be measured on the 10 samples in the same order. Lining the samples up on a sheet of paper and numbering next to them will assist this process.

1. Test the Capacitance of the specimens using the Aglient LCR meter and record the data on the worksheet. This can be done electronically using a custom LabVIEW program or manually. Reference CR1040 for more information.
2. Test the Thickness of the specimens using Mitutoyo micrometers and record the data on the worksheet. This can be done electronically using wired micrometers or manually.
3. Save the worksheet in network folder “R:\Crystals\Test Data\Thickness Calculations”, naming it using the Job Order. This can be done by scanning the barcode or manually.

Example - R:\Crystals\Test Data\Thickness Calculations\CR6297.xlsx

1. The worksheet will automatically calculate the appropriate thickness target based on the measured capacitance/thickness ratio of the parts.
2. Print a copy of this worksheet and add it to the job paperwork.
3. Save and close the worksheet.
4. Look at the notes field on the worksheet. If the calculation predicts there may be failures, a note will appear indicating the job needs to be 100% tested. Move the job to the Engineering Hold Shelf and notify your Supervisor, Engineer, or Leadperson.
5. If no error note appears, return the 10 samples to the rest of the crystal lot and move the entire job on to the next operation.