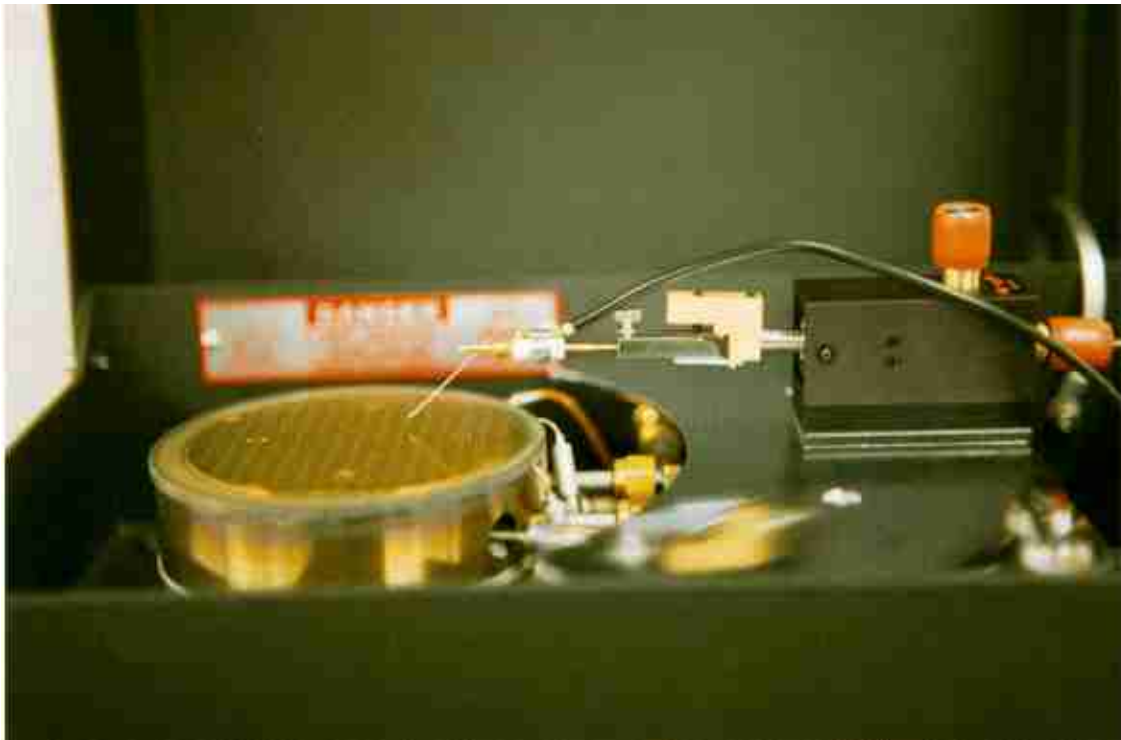


SIGNATONE'S HIGH TEMPERATURE HOT CHUCKS up to 600°C

For a number of years, Signatone has manufactured hot chuck systems that have a range of ambient to 300°C. Recently, several request have been made for probing at higher temperatures particularly when testing Silicon Carbide wafers. Signatone has responded by creating a hot chuck system allowing the chuck to be stressed at temperatures between 550°C and 600°C.



ENVIRONMENT

The changes include creating a safe environment around the chuck that remains cool while the chuck is at lofty temperatures. Signatone's D1 or D3 light tight box includes water cooling provisions for keeping the box at a safe temperature. The D1 provides a platen for holding 2 probes comfortably while the D3 allows up to 8 probes.

HOT CHUCK

The chuck itself has a stronger heater and special plating to attain the higher temperature. It is offered in 4 inch and 6 inch diameters. BNC back side connection is provided. The surface is ground flat to ± 0.0005 inches. Vacuum grooves may be plugged with a screw so that various size wafers, slices or single chips are held in place for probing.

CONTROLLER

Signatone's standard S-1060 controller is modified to drive the hot chuck to the high temperatures with 1° resolution. When driving the 4" chuck, the temperature range is ambient to 610°C. When used with the 6" chuck, the high range is 550°C. Setting the desired temperature is easily done at the press of the button. When it's time to cool, the cool button is pressed and energy to the heater ceases. The chuck is air cooled to about 300°C then water speeds up the process to bring the system back to room temperature.



MANIPULATORS AND PROBE HOLDERS

The probe set is modified also to accept the high temperatures. Probe tip holders are isolated with ceramic instead of regular Teflon. The manipulators have additional thermal protection as well. Probe tips are the 2" long SE-TL's which allow the probe tip holder to be off the surface a little further.

Required Utilities

Power: S-1060 = 15 amp @ 115VAC

Chiller = 12 amp @ 115VAC

Nitrogen or compressed air 40 PSI and 1.5 CFM

MODEL NUMBERS

S-1060H/[c]QRD[b]

b = light tight enclosure size

D2- accommodates 3 probes

D4- accommodates 6 probes

c = chuck diameter

4 - 4 inch range 600°C

6 - 6 inch range 550°C

CV-H High temperature probe kit including S-725 micropositioner modified for high temperature, ceramic shielded probe tip holder with BNC termination and SE-TL long probe tips.

NL-CFT33 Recirculating chiller configured for use with **S-1060H**.