

GENERAL PROCESS AND OPERATION SPECIFICATION

Veeco FPP 5000 Four Point Probe



1. SCOPE

These procedures apply to the VEECO FPP-5000 4-Point Probe test unit. All maintenance should follow the procedures set forth in the manufacturer's maintenance and operations manuals. This document is for reference only. Users must be trained by AggieFab staff before operating this equipment.

2. SAFETY

- a. This machine is connected to **HIGH VOLTAGE**. Be very careful and remain aware of electrical hazards. If you encounter any electrical malfunctions, contact AggieFab staff immediately.
- b. The probe head can easily be damaged. Do not bump anything into the probes.
- c. Users are not allowed to adjust the platen height or clean the probe-head. For any platen or probe-head issues call staff.

3. KEYBOARD DESCRIPTION

- a. **V/I** - Displays measured V/I multiplied by programmed GEOM Constant.
- b. **SHEET** - Displays sheet resistance based on measured V/I.
- c. **SLICE** - Calculates the bulk resistivity of a slice of layer whose thickness is entered in the PRGM mode.
- d. **THICK** - Calculates the thickness of a layer of slices whose bulk resistivity is entered in the PRGM mode.
- e. **TYPE** - When selected, a type test is performed.
- f. **PEN** - When selected, a penetrate voltage is applied to the sample.
- g. **PRGM** - Put the keyboard into the PRGM mode for entering bulk resistivity or film thickness. Press STORE afterwards to store the input into system memory.
- h. **SELF-TEST** - Performs a system self-test.
- i. **RETEST** - Performs a retest when the previous test failed.
- j. **CONST** - Displays the selected input stored in the memory.
- k. **NUMERICAL KEYS** - To enter the input required for calculation.



4. OPERATION PROCEDURES

- a. Enable tool through iLab login. Power switch should be in the ON position.
- b. All display lights should be on.
- c. Press CLEAR and open lid.
- d. Place the wafer (shiny side down) or samples you wish to probe in the appropriate position on the probes.



- e. Adjust the rear stop by loosening the thumb screw and moving the position of the stop.
- f. Place the plastic platen on top of the samples.

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- g. Select desired measurement mode.
- h. Close the lid and gently press down until the measurement is complete. Results will be shown on the display.
- i. When finished, open the lid. Remove your samples and close the lid.
- j. Log out of the iLab and record any malfunctions or comments in the log sheet.

Approvals:

Technical Manager Signature: Larry Rehn

Date: 2/25/2020

Revision History:

Revision	Author	Date
Original Issue	Ming-Wei Lin	02/25/2020
Rev A		
Rev B		
Rev C		
Rev D		
Rev E		