Agilent Technologies E5029Z Option 100 Z-Height Check Tool

Operation Manual

First Edition

Agilent Technologies
Innovating the HP Way

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Notices

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Manual Printing History

The manual's printing date and part number indicate its current edition. The printing date changes when a new edition is printed. (Minor corrections and updates that are incorporated at reprint do not cause the date to change.) The manual part number changes when extensive technical changes are incorporated.

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Assistance

Product maintenance agreements and other customer assistance agreements are available for Agilent Technologies products.

For any assistance, contact your nearest Agilent Technologies Sales and Service Office.

Addresses are provided at the back of this manual.

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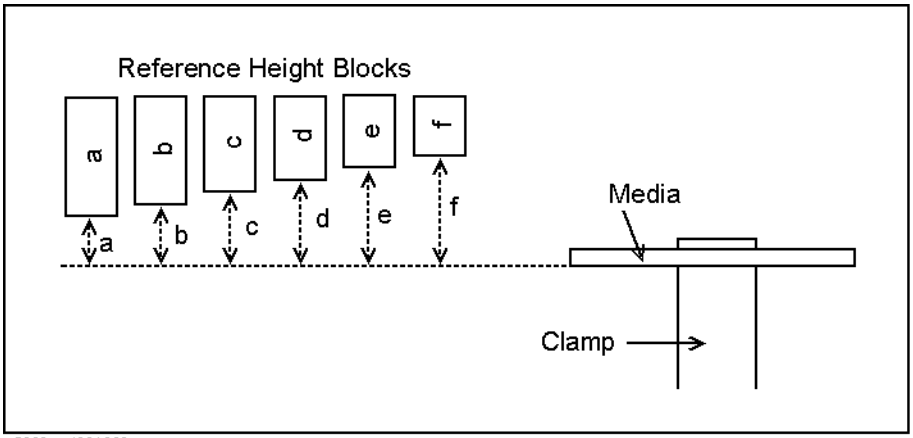
1 General Information

Product Introduction

Agilent E5029Z Option 100 Z-Height Check Tool is a tool to measure the Z-Height of E5029E cassette. This tool is used for all options of the E5029E cassettes.

Agilent E5029Z Option 100 has the several reference height blocks. The values are labeled on each block means height between its bottom surface and the clamp surface (the bottom of media).

Figure 1-1 **Reference Height Blocks**



Required Equipment

Table 1-1 lists the equipment required for the Z-height check. Other equipment may be substituted if equipment has enough performance for test.

Table 1-1 Recommended Test Equipment

Equipment	Recommended Model	Qty
Granite Surface Plate	Mitsutoyo Black Granite Surface Plates Series 517	1
Micrometer	Mitsutoyo Mu-Checker M400 Series	1
Micrometer Probe (Lever Head Type)	Mitsutoyo Gage Heads for Mu-Checker 519-322	1
Granite Surface Plate Stand	Tokyo Seimitsu E-ST-LCB	1
Mirror	Media can be used as a mirror	1

2 Z-Height Check Procedure

This chapter describes the procedure to measure the Z-height of the E5029E cassette.

Procedure

This section provides the procedure to measure the Z-height.

Step 1. Wipe the surface of the granite surface plate, the bottom of the Z-height checker, the reference level block of the Z-height checker, the base of the cassette and the HGA mount block of the cassette with alcohol in order to clean the surface so that you might measure it precisely.

Figure 2-1 **Cleaning the Surface**

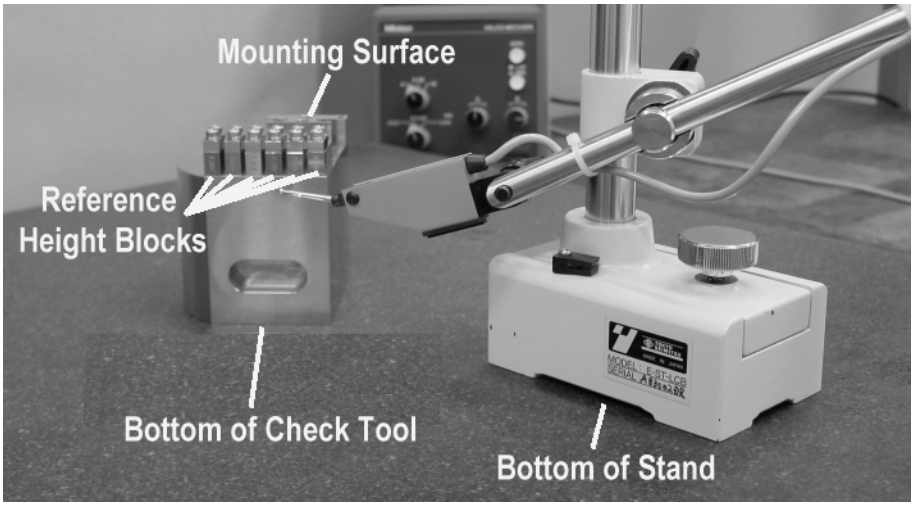
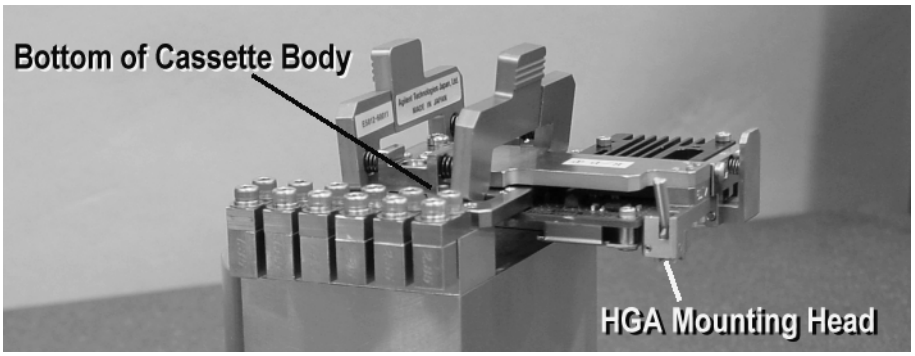
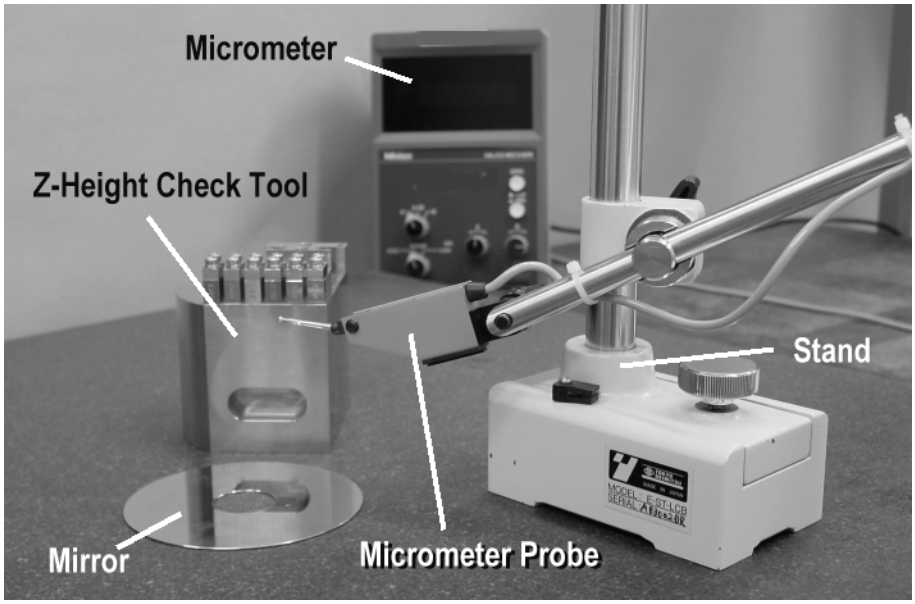


Figure 2-2 **Cleaning the Surface of the Cassette**



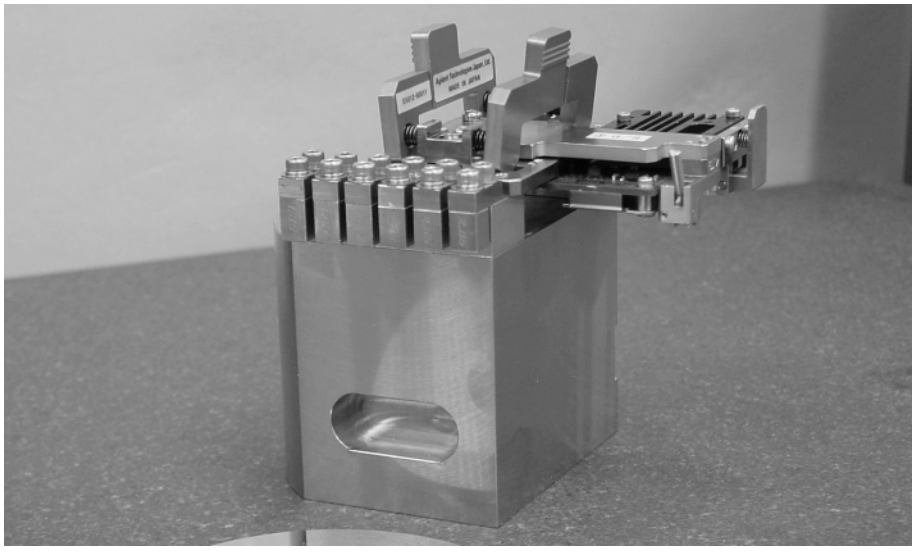
Step 2. Place the Z-height checker, the micrometer probe with the stand and the mirror on the center of surface of the granite surface plate.

Figure 2-3 **Place the Equipment**



Step 3. Put the micrometer probe on the selected block.

Figure 2-4 **Put the Cassette**



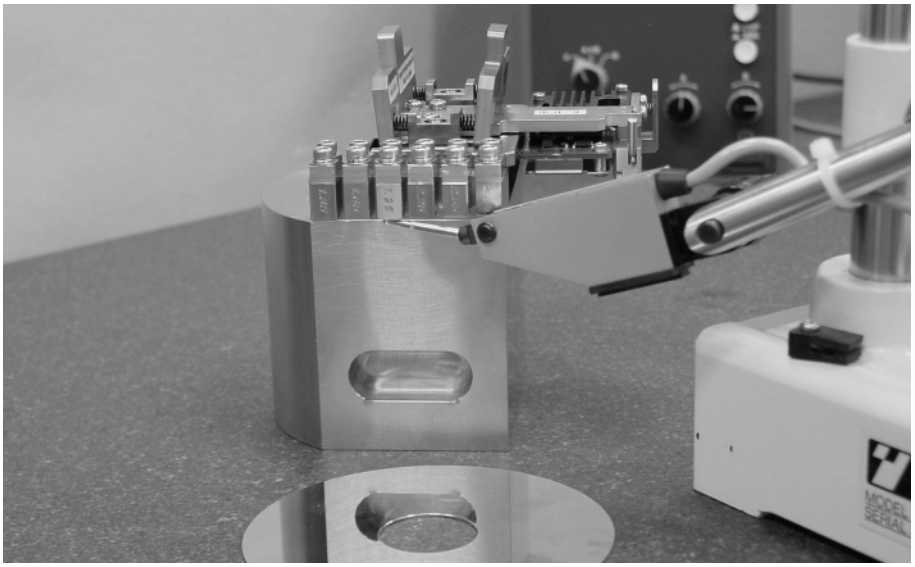
Step 4. Calculate the sum of Z-height and the media thickness for the cassette. Select the reference height block which has the closest value to it.

Example: Z-Height: 0.525mm, Media thickness: 1mm, Total height: 1.525mm

The closest reference height block is one labeled 1.65.

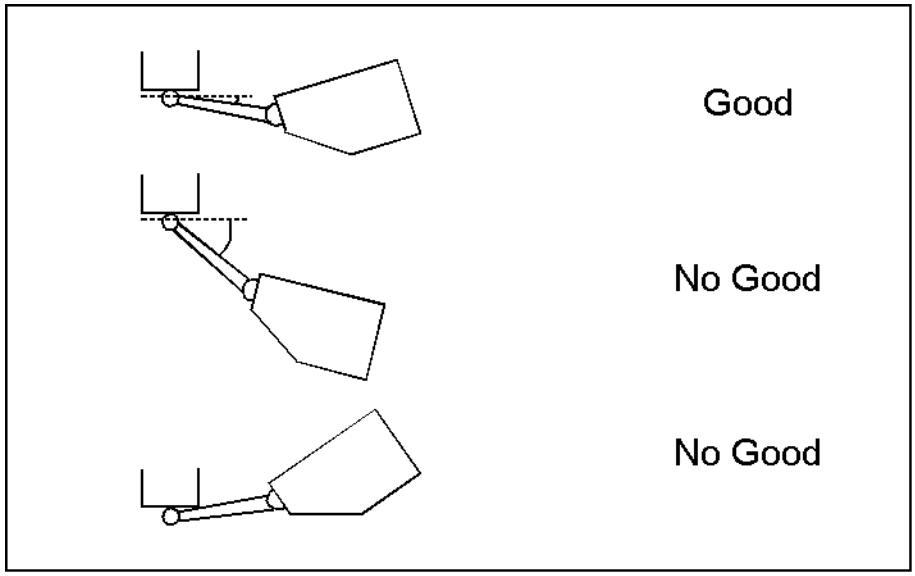
Step 5. Put the micrometer probe on the bottom of the selected block. Locate the probe at the center of block. The mirror is used to see the bottom of block and the probe.

Figure 2-5 **Set the Reference Height**



NOTE The probe contact with the block should be as shown in the Figure 2-6 in order to measure it precisely.

Figure 2-6 **Probe Contact with the Block**



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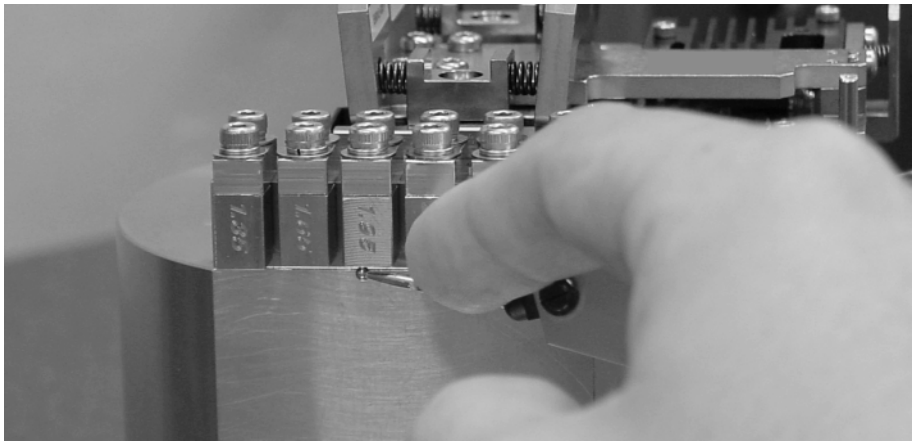
Step 6. Set the micrometer reading at zero

Step 7. Push the probe gently in order to release the micrometer probe from the block and then move the stand. If the probe is released roughly, the probe position might be

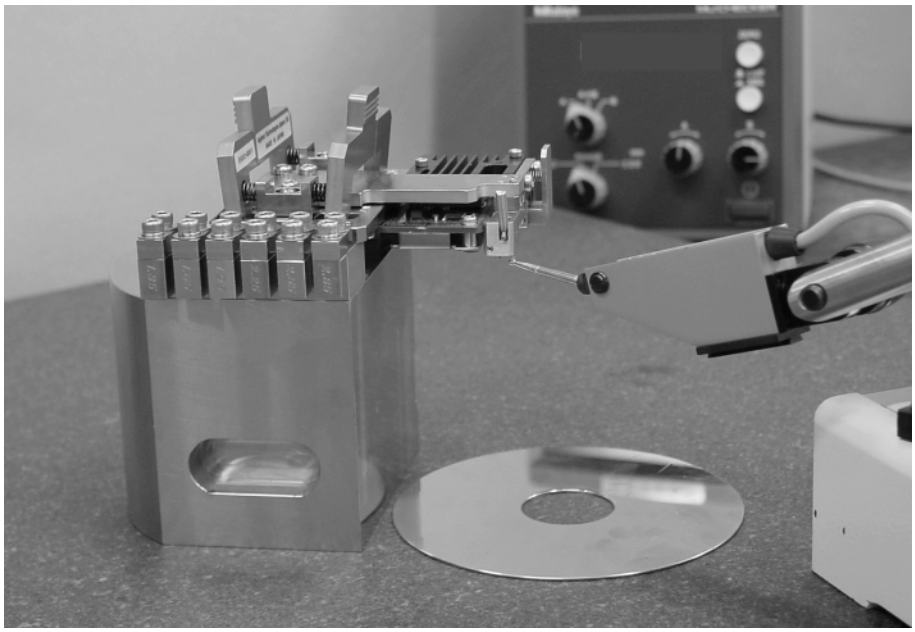
moved.

Figure 2-7 **Releasing the Micrometer Probe**



Step 8. Put the micrometer probe on the HGA mounting block. See the mirror to confirm the probe on the HGA mounting surface properly.

Figure 2-8 **Measure the Z-Height**



Step 9. Read the micrometer display. The down direction from the reference level should be positive.

Step 10. Calculate the Z-height according to the following equation.

Equation 2-1 Formula of Z-Height

$$Z = Reference - Reading - MediaThickness$$

Figure 2-9 Z-Height Calculation