

Cross-section Test Report

Report No: VN20220720004-2
Sample Name: PCBA
Applicant Department: JBD ME
Test Item: Cross-section
Test Environment: 24.3°C/55.1%RH
Test Completion Date: Jul. 26, 2022

Approved by	Checked by	Prepared by
林清波	楊光宇	吳志順

Notes:

- 1.This report is only applicable to the submitted samples.
- 2.Partial copy this report is prohibitive if not approved by testing center.

1. Problem Description:

In order to check the solder joints quality of PCBA, the cross-section test was performed. The specimens to be tested was specified as below.

2. Sample Information:

Sample Name	Model	S/N	Location
PCBA	K18X001.00	YW11JRS	U1,U1313

3. Test Equipment:

No.	Equipment	Brand/Model
1	Grinding & Polishing Machine	Brand: PRESI Model: Minitech 250 DP1
2	Vacuum system	Brand: Buehler Model: 20-1382-250
3	Metallographic Microscope	Brand: Olympus Model: BX53M
4	Precision Cutting Machine	Brand: Toptech Preciso Model: CL50

4. Test Procedure:

The cross section preparing procedure was conformed to IPC-TM-650 2.1.1.

5. Test Result:

5.1 Cross-section:

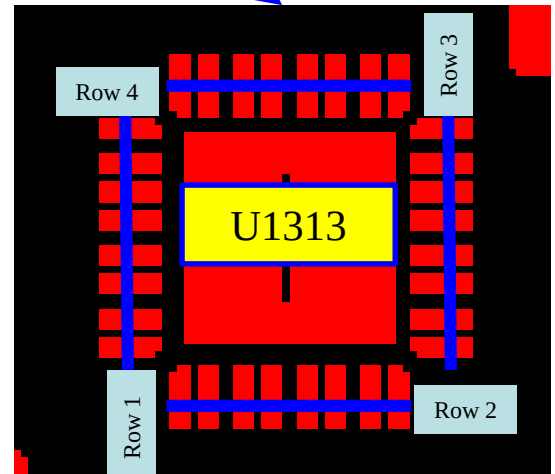
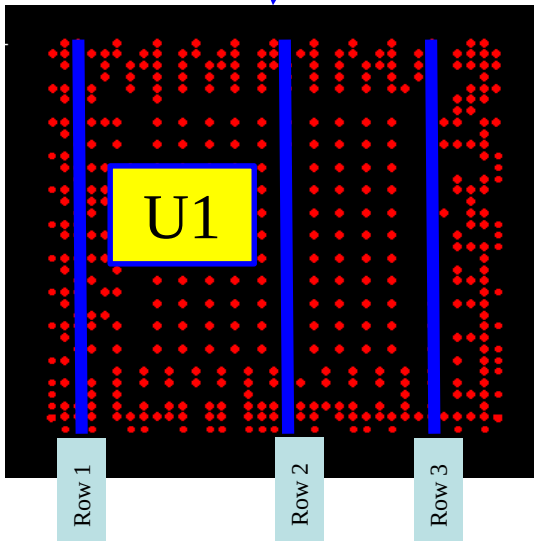
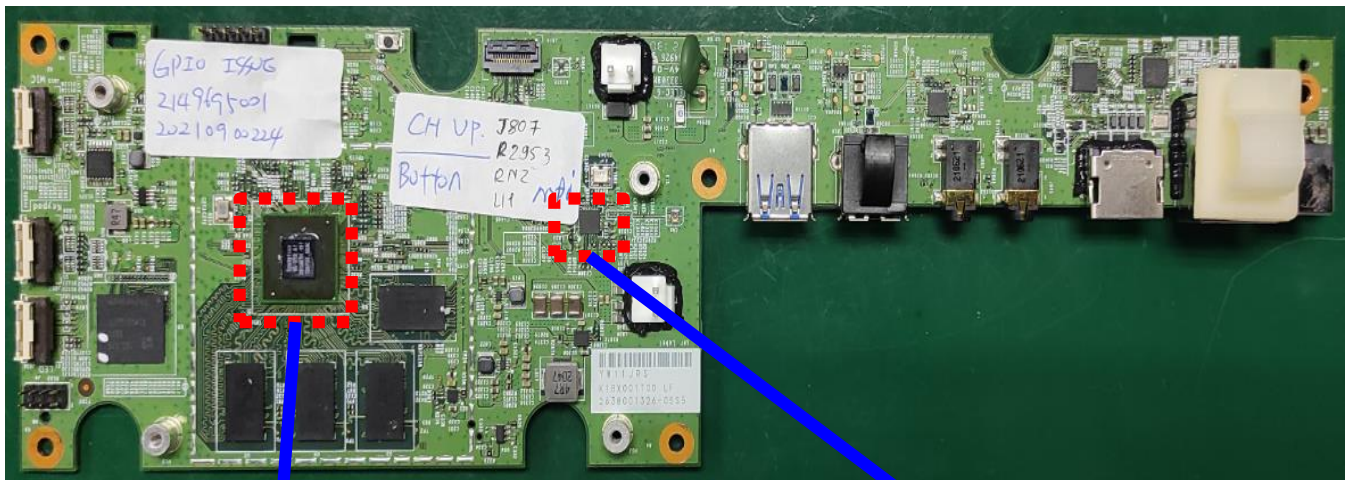
Location	Result	Remark
U1	good wetting	Page 5~7
U1313	good wetting	Page 8~11

5.2 IMC thickness measurement data:

Unit: μm

Location			Measurement data			Average
U1	Row 1	Component side	2.57	2.30	2.43	2.43
		PCB side	2.97	3.11	2.43	2.84
	Row 2	Component side	2.43	2.70	2.97	2.70
		PCB side	1.49	2.30	2.03	1.94
	Row 3	Component side	1.89	2.43	3.51	2.61
		PCB side	2.30	2.97	2.57	2.61
U1313	Row 1	Component side	1.89	1.76	2.16	1.94
		PCB side	1.89	1.49	2.30	1.89
	Row 2	Component side	2.73	2.80	3.21	2.91
		PCB side	1.91	1.30	2.11	1.77
	Row 3	Component side	1.76	1.62	1.76	1.71
		PCB side	1.76	1.89	1.89	1.85
	Row 4	Component side	2.03	2.03	1.62	1.89
		PCB side	1.49	1.89	1.62	1.67

6. Test Location:

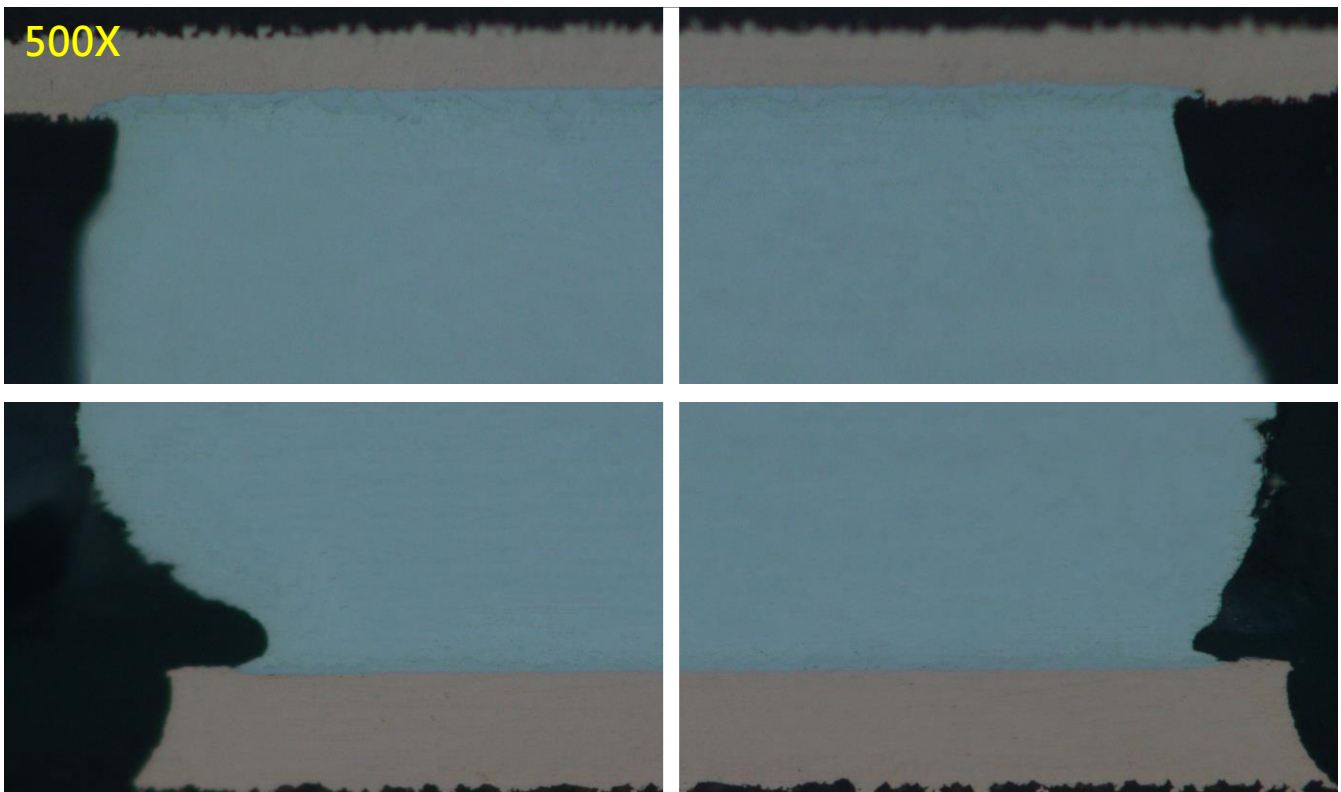
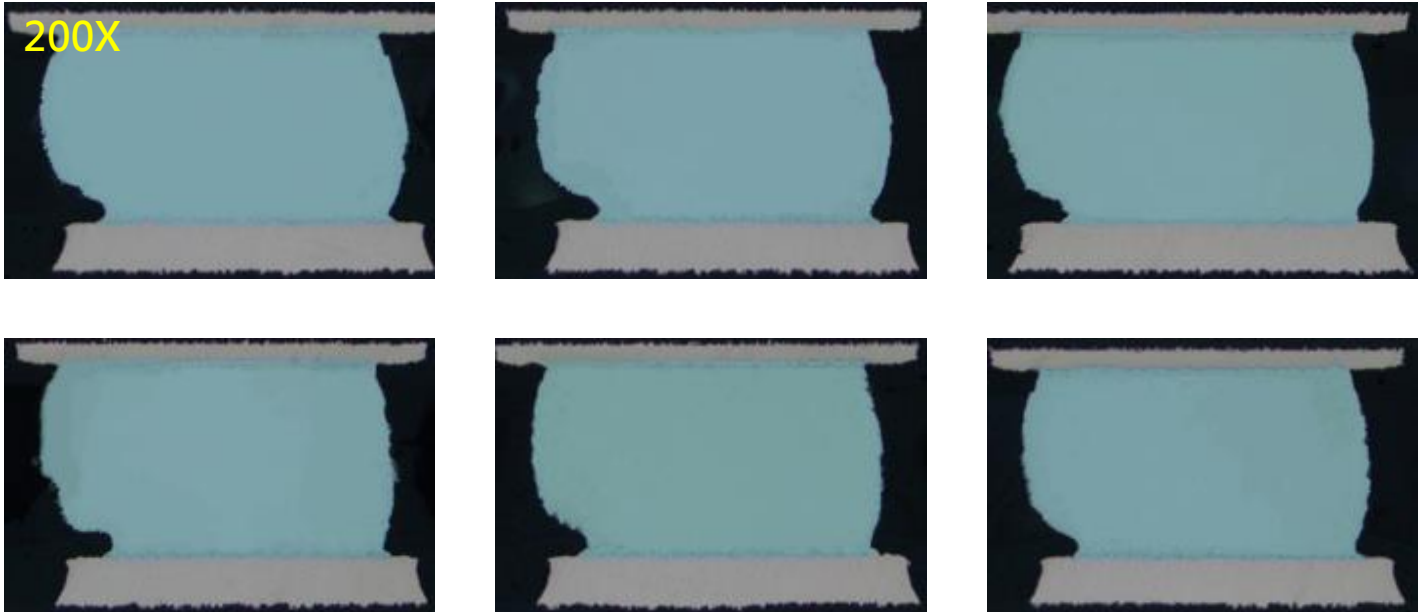


The locations of cross-section are shown as red lines.

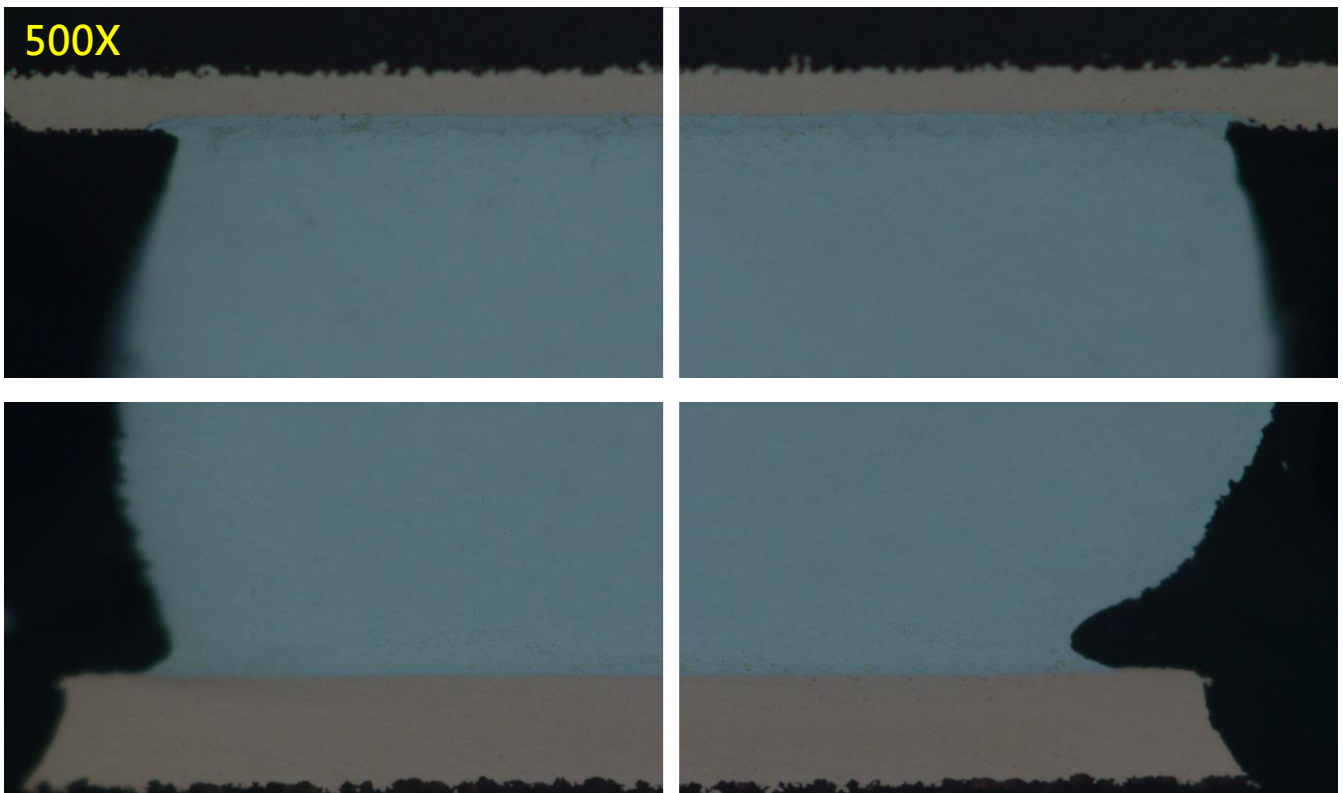
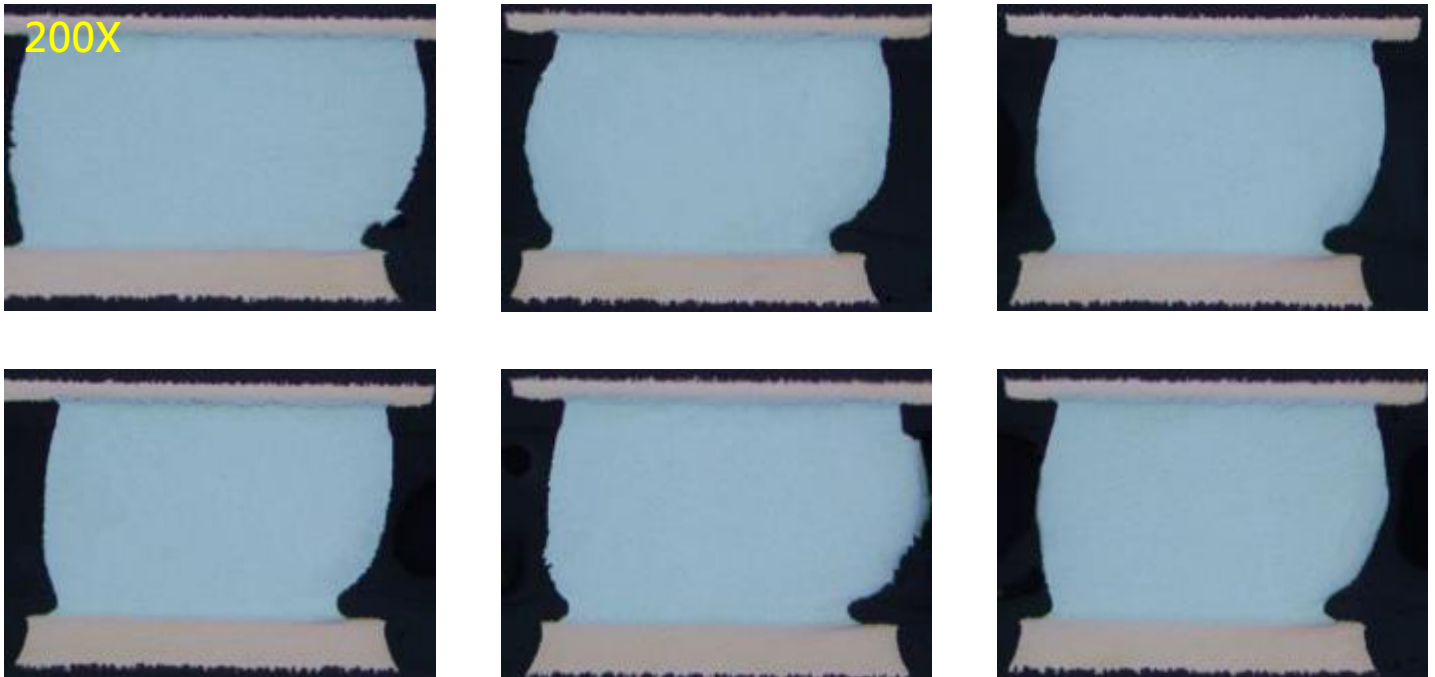
7.Cross section Microstructure Inspection:

U1: All the solder joints show good wetting .The representative photos are shown as below.

ROW 1

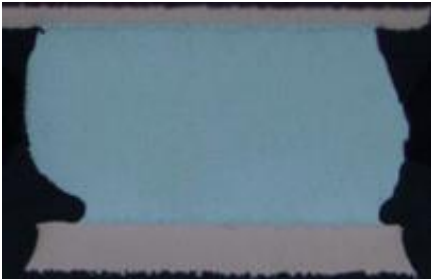


ROW 2



ROW 3

200X

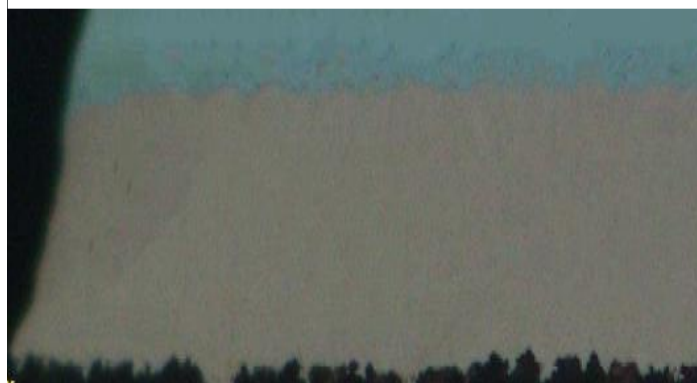
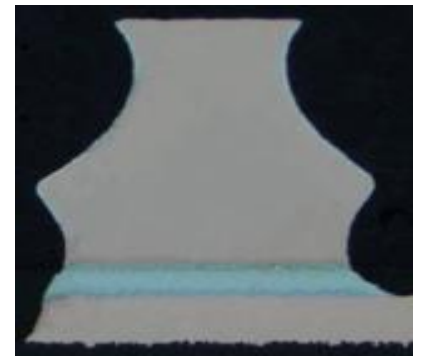
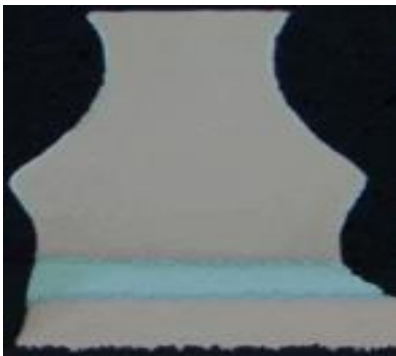
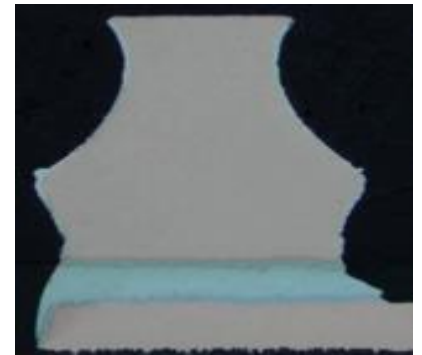
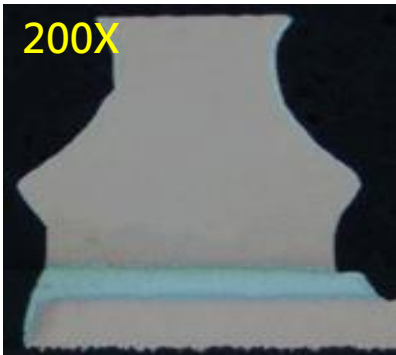


500X

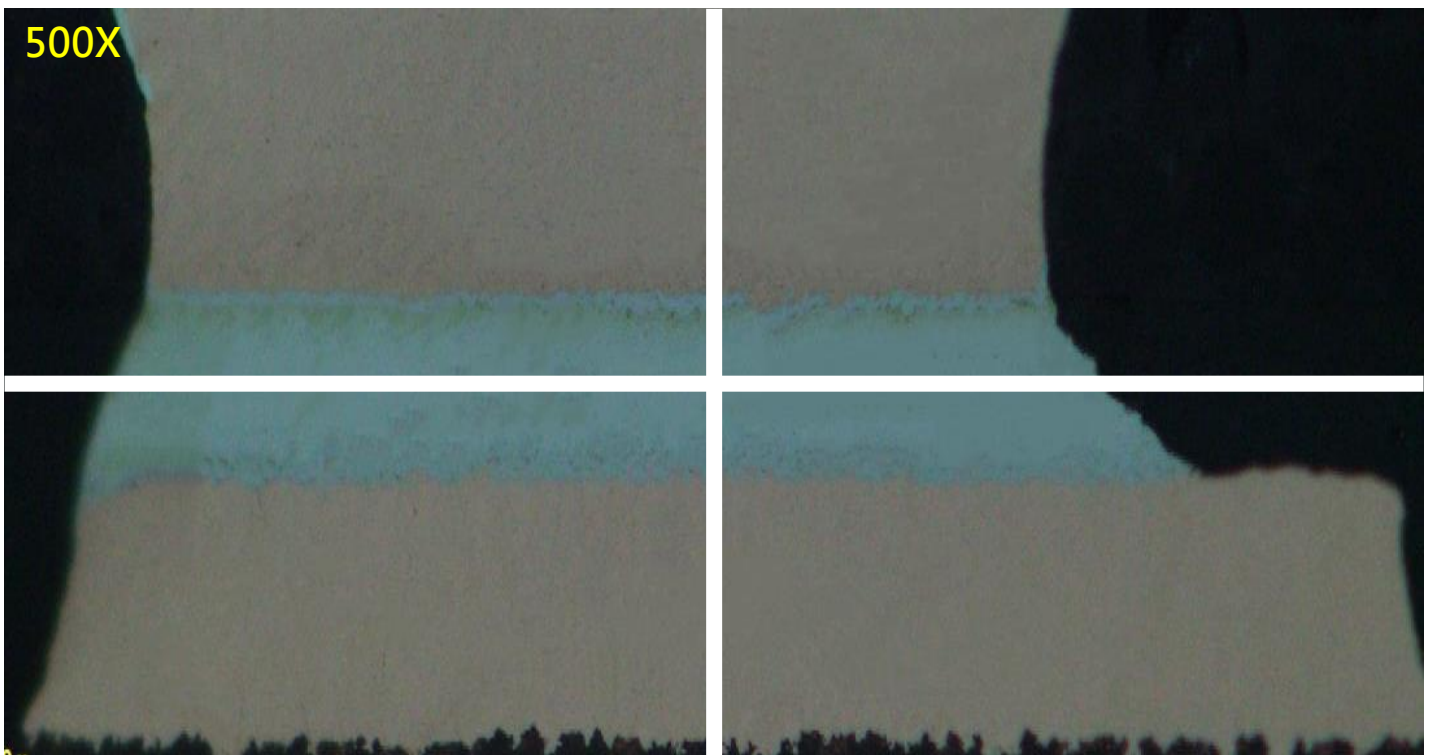
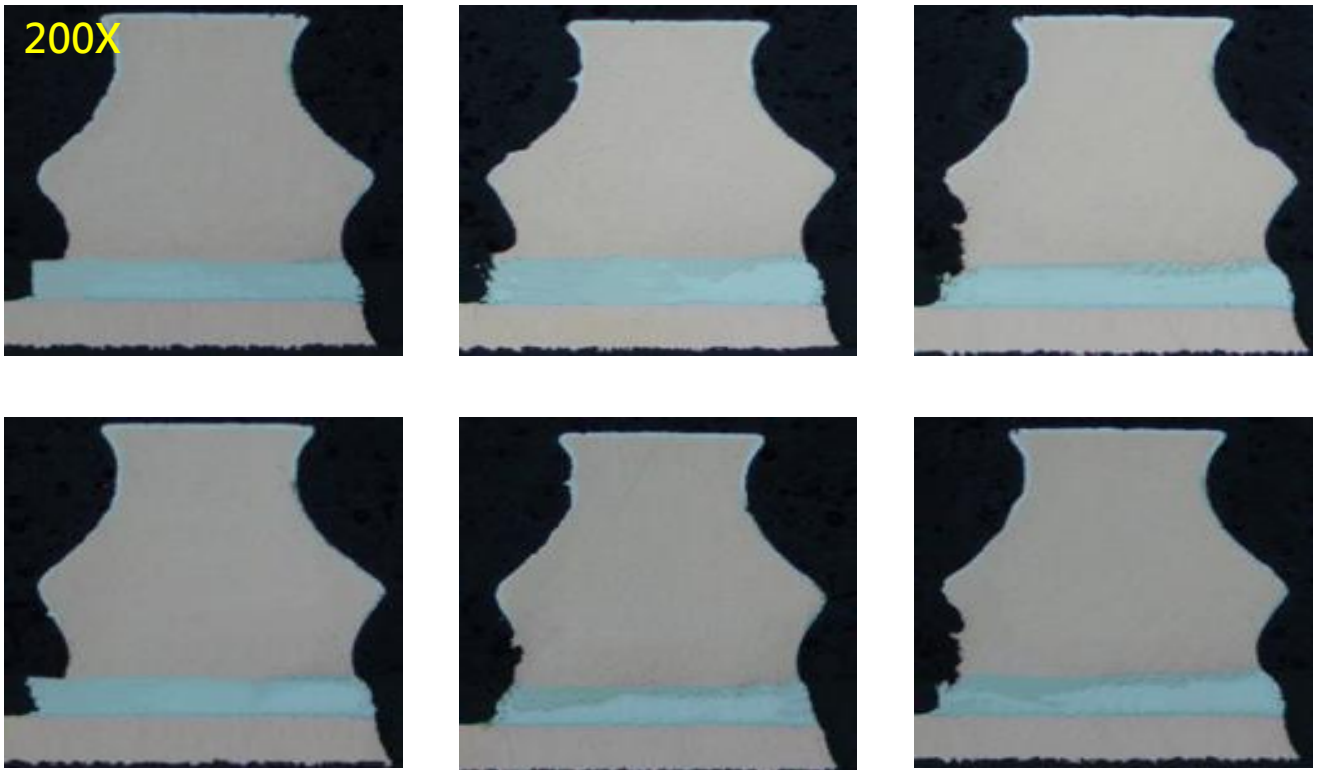


U1313: All the solder joints show good wetting .The representative photos are shown as below.

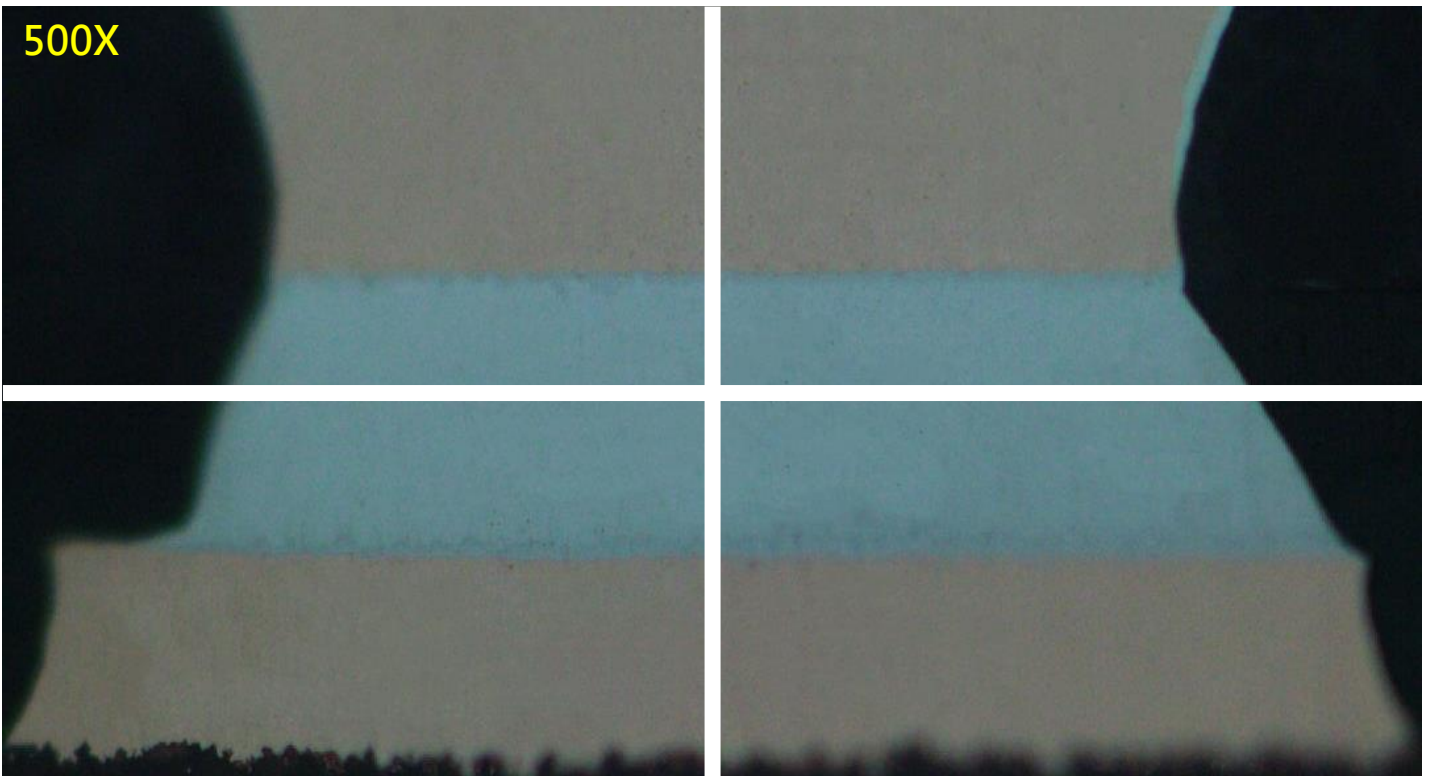
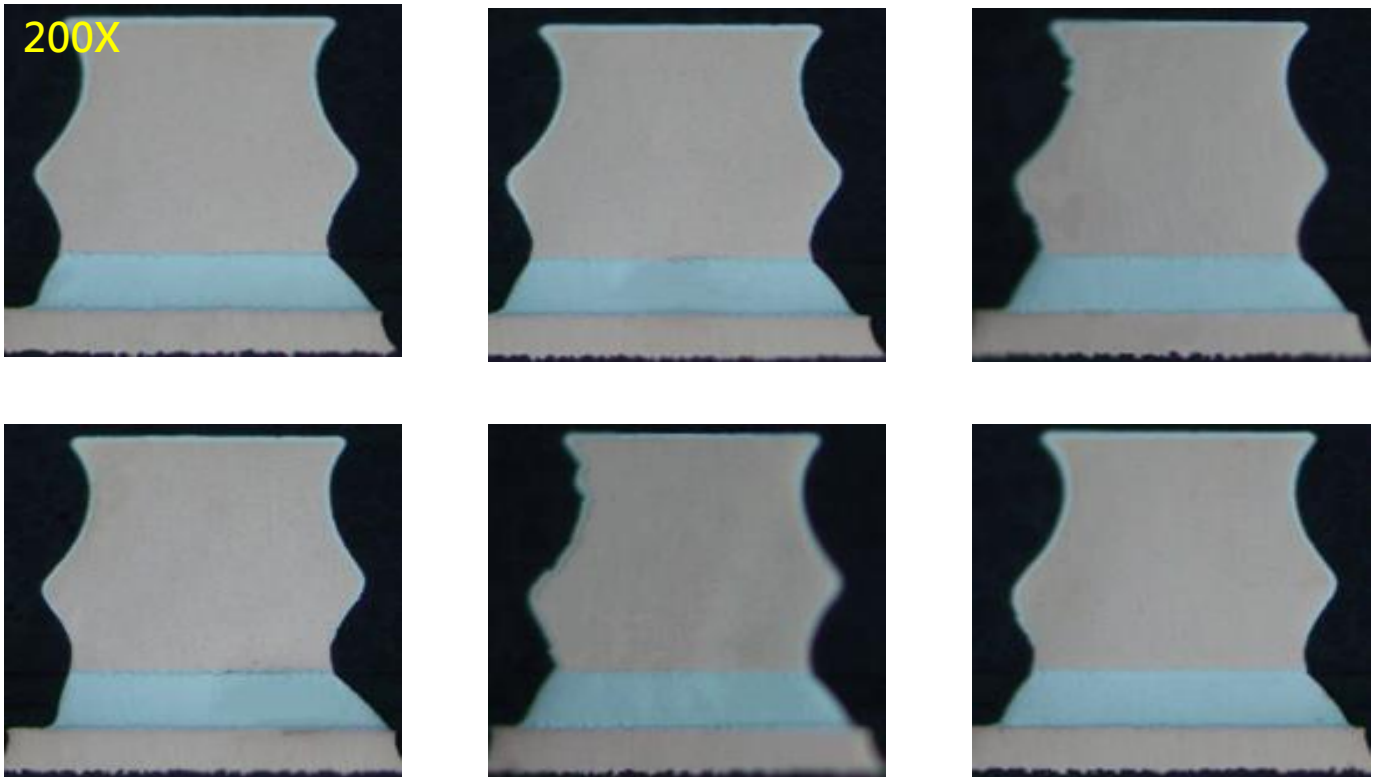
ROW 1



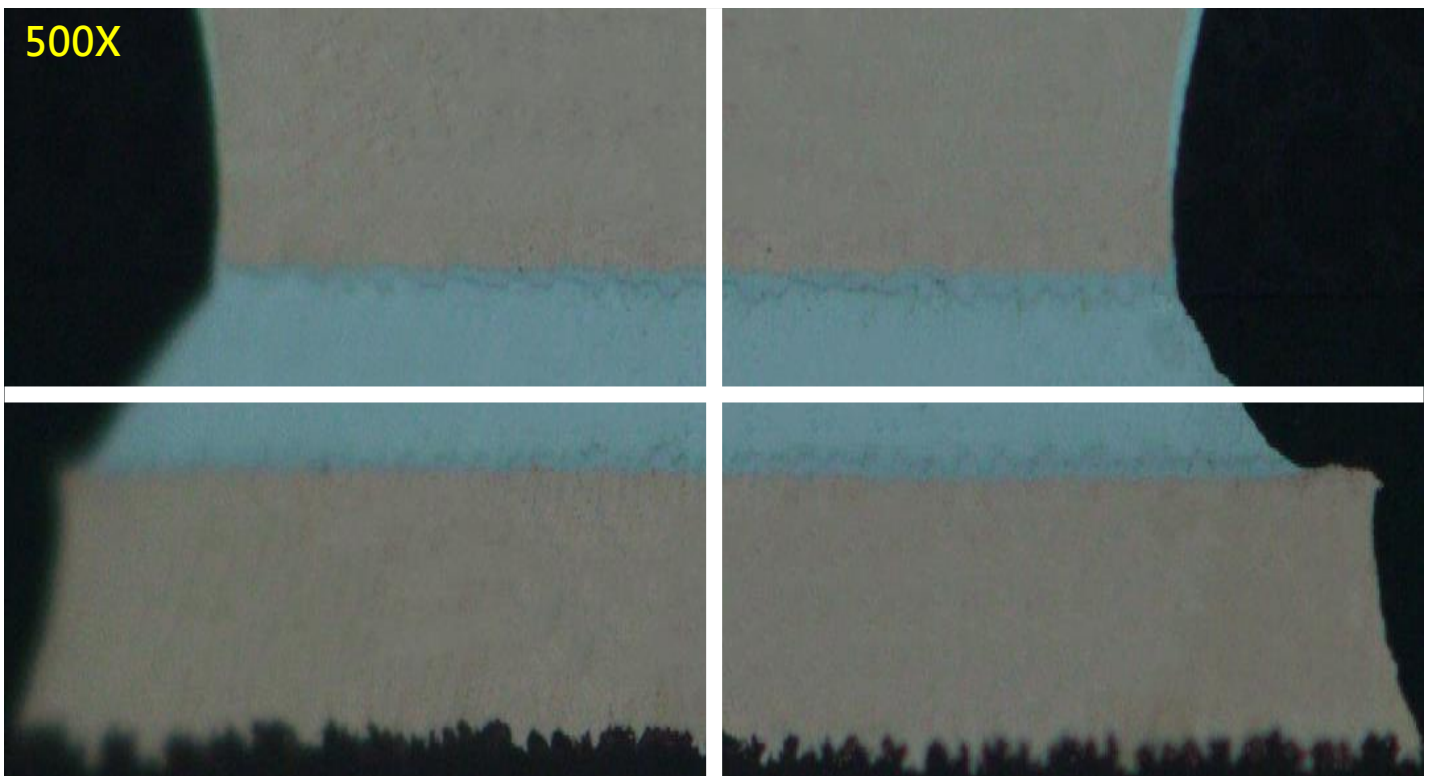
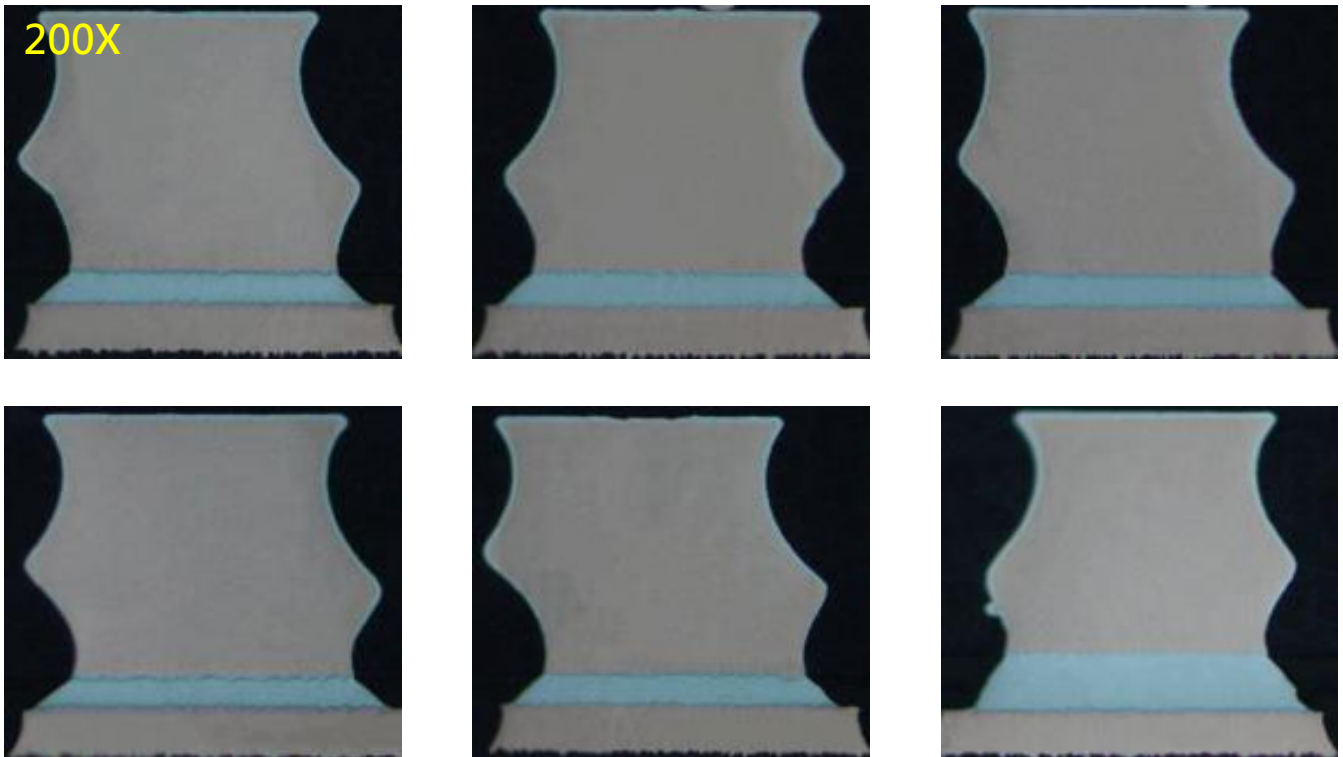
ROW 2



ROW 3

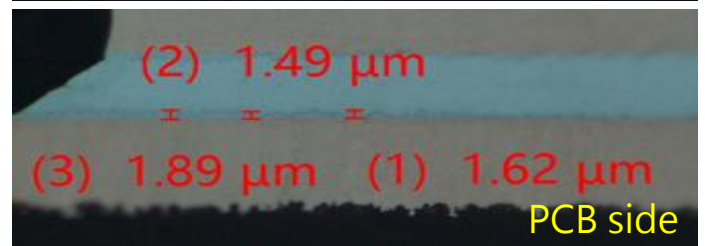
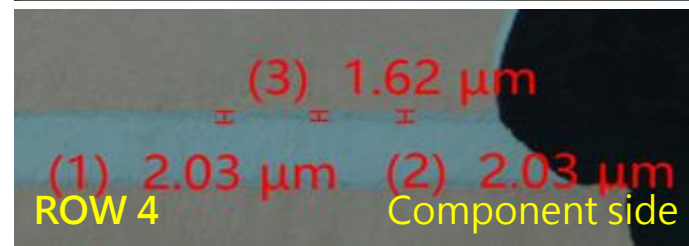
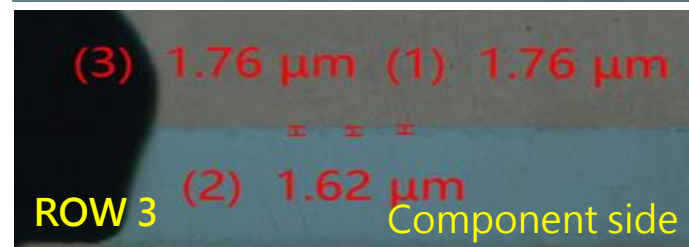
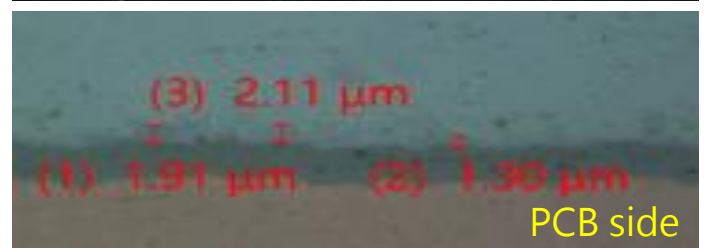
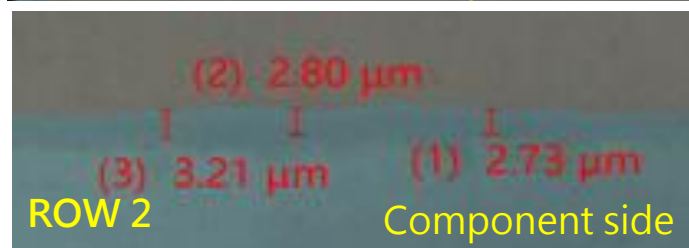
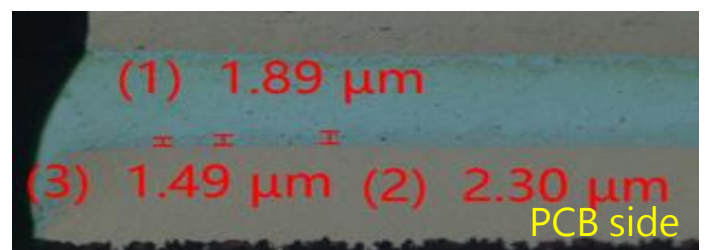
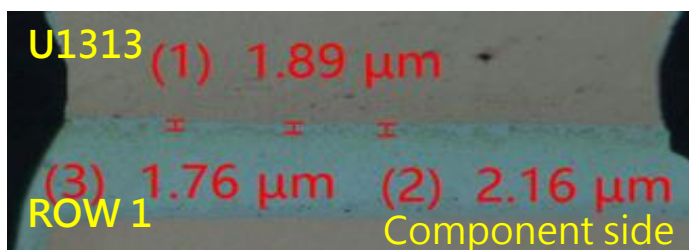
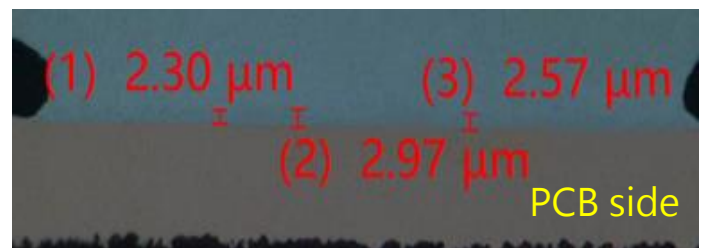
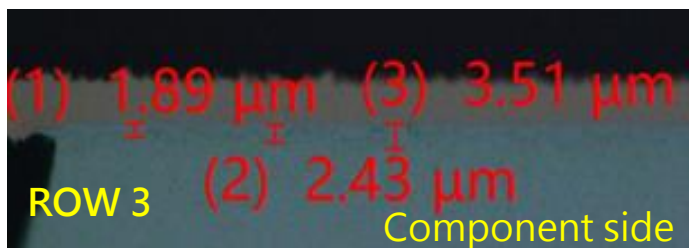
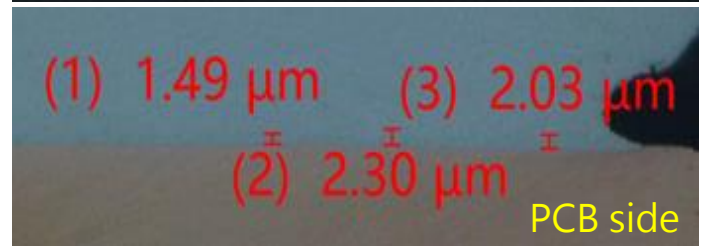
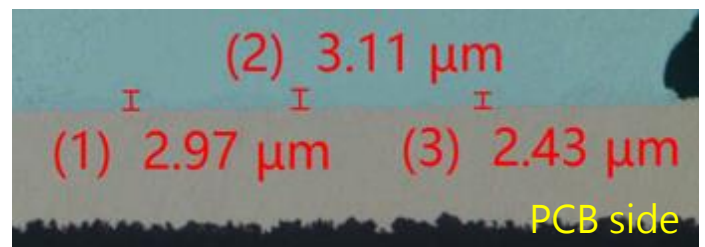
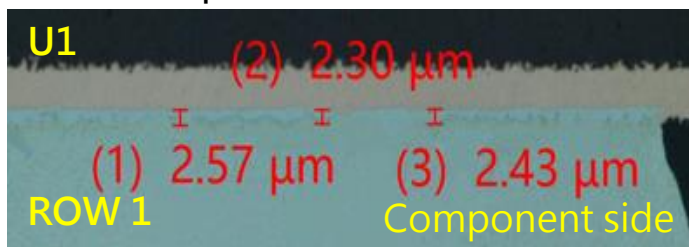


ROW 4

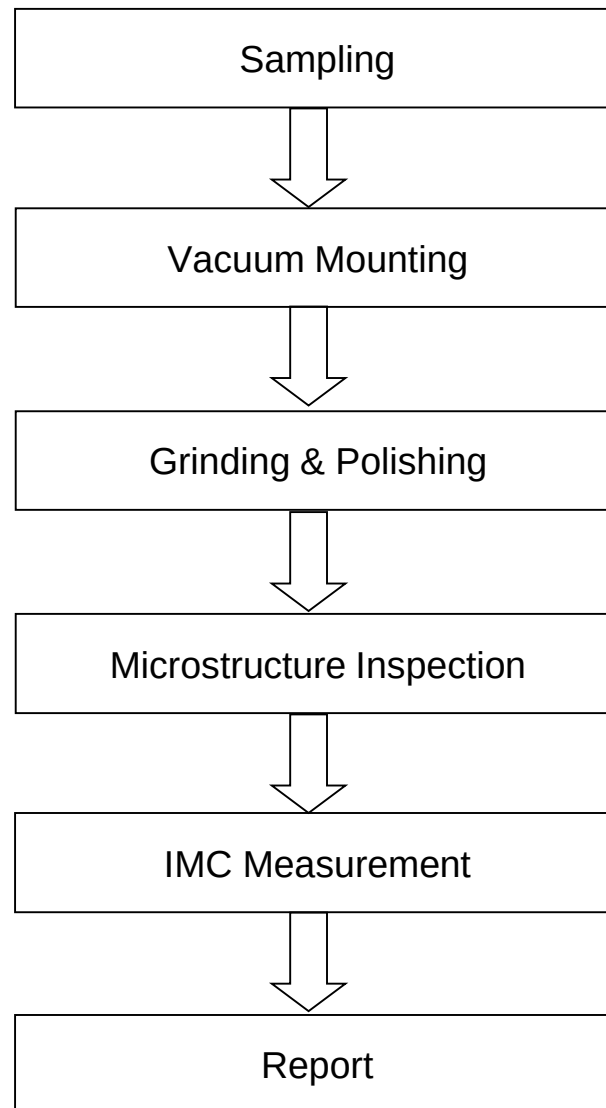


8. Thickness Measurement:

8.1 The photos of IMC measurement are shown as below:



9. Flow Chart :



-----The End-----