3D SPI

Equipment Advantage & Function Introduce

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3D SPI Specification And Working Principle

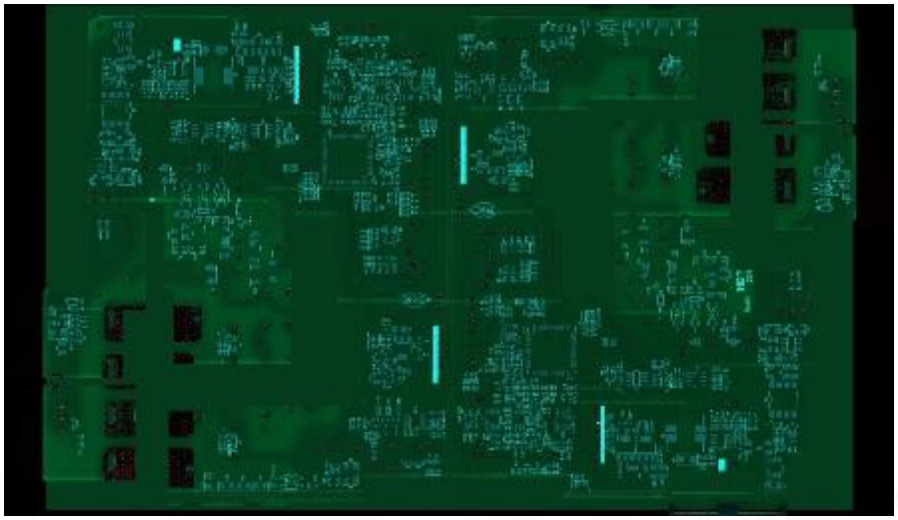
3D SPI inspection machine in our SMT line:

3D SPI Specification And Working Principle

Part Number	S8080		
Inspection Principle	PSLM PMP		
Inspection Item	Volume, area, height, XY offset, shape		
Defective Type	Missing print, insufficient solder, excess solder, bridging solder, deviation, poor shape, surface contamination		
Industry Camera	5M pixel	LED Color	Red/Blue/White
X/Y Resolution	15um	Inspect Speed	FOV/0.42s（25*20mm）
Height Inspection Range	±350μm（±1200μm available）	Z-axis Resolution	0.37μm
Height Accuracy	<1μm	Measurement repetition rate	<1% at 6sigma
Gage R&R	<10%		
PCB Size	Monorail mode: 50*50-460*460mm		
PCB Flow Direction	Left - Right OR Right - Left		
PCB Warpage	±5mm		
PCB Loading Height	900±40mm		
Loading Height	3mm		
Operating System Support	WINDOWS 10（64 bit）		
Gerber & CAD Import	Gerber Data 274D/274X， Manual Teach Mode CAD X, Y, Part No. Package Type Import		
Operating Mode	Mouse + Keyboard		
Equipment Dimension	W1000*D1150*H1580mm		
Equipment Weight	1050KG		
Voltage	200-240V AC,50/60HZ		
Air Pressure	5kgf/cm²		
Environment Temperature	5-40℃		
Environment Humidity	25%-80%		

Product Testing Information

B2190 SPI Machine



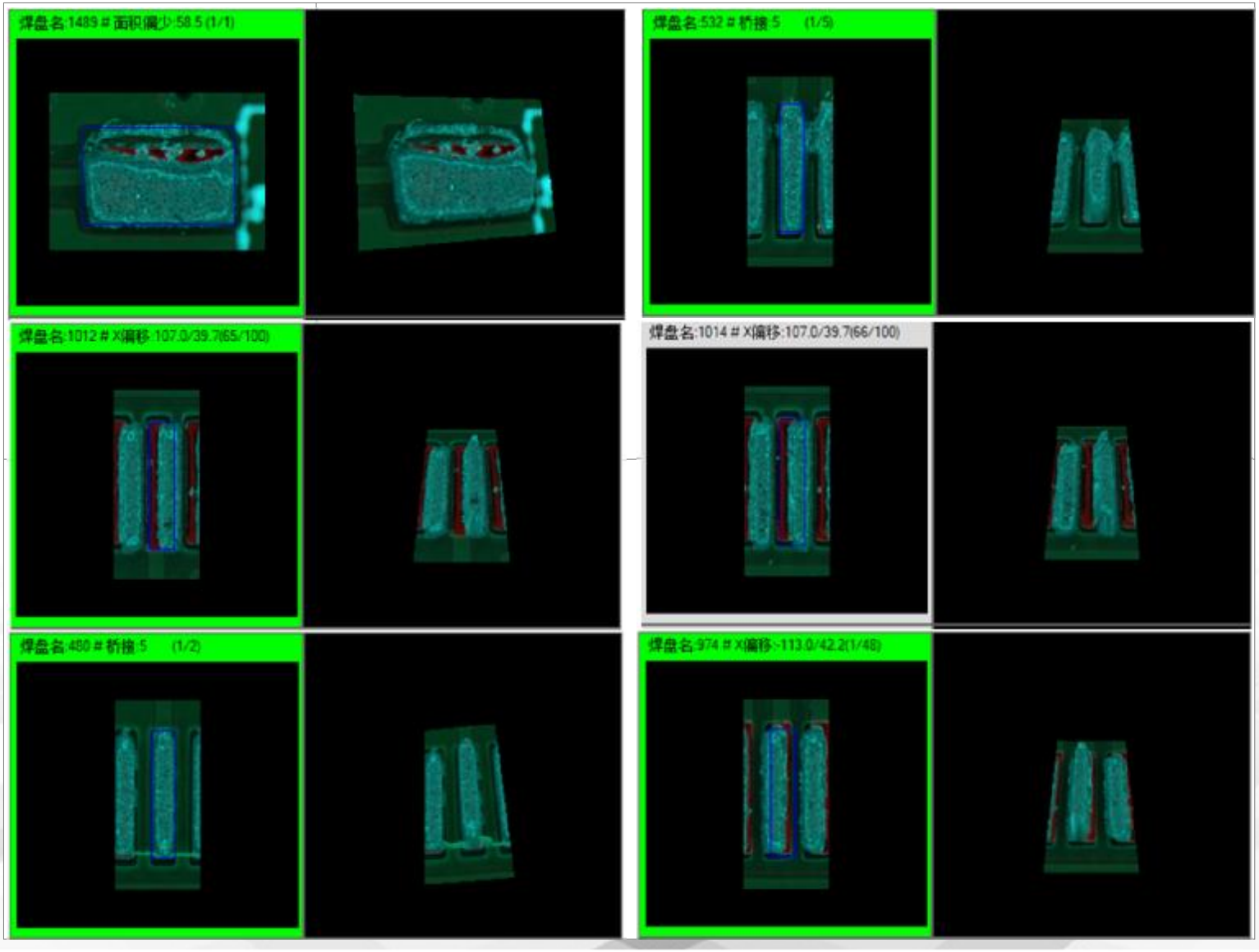
Total PAD Qty	1506
FOV Qty	33
Testing Time	14.63s
Stencil Thickness	120um

PCB Size：173mm*270mm

Min Pad Package: 0603

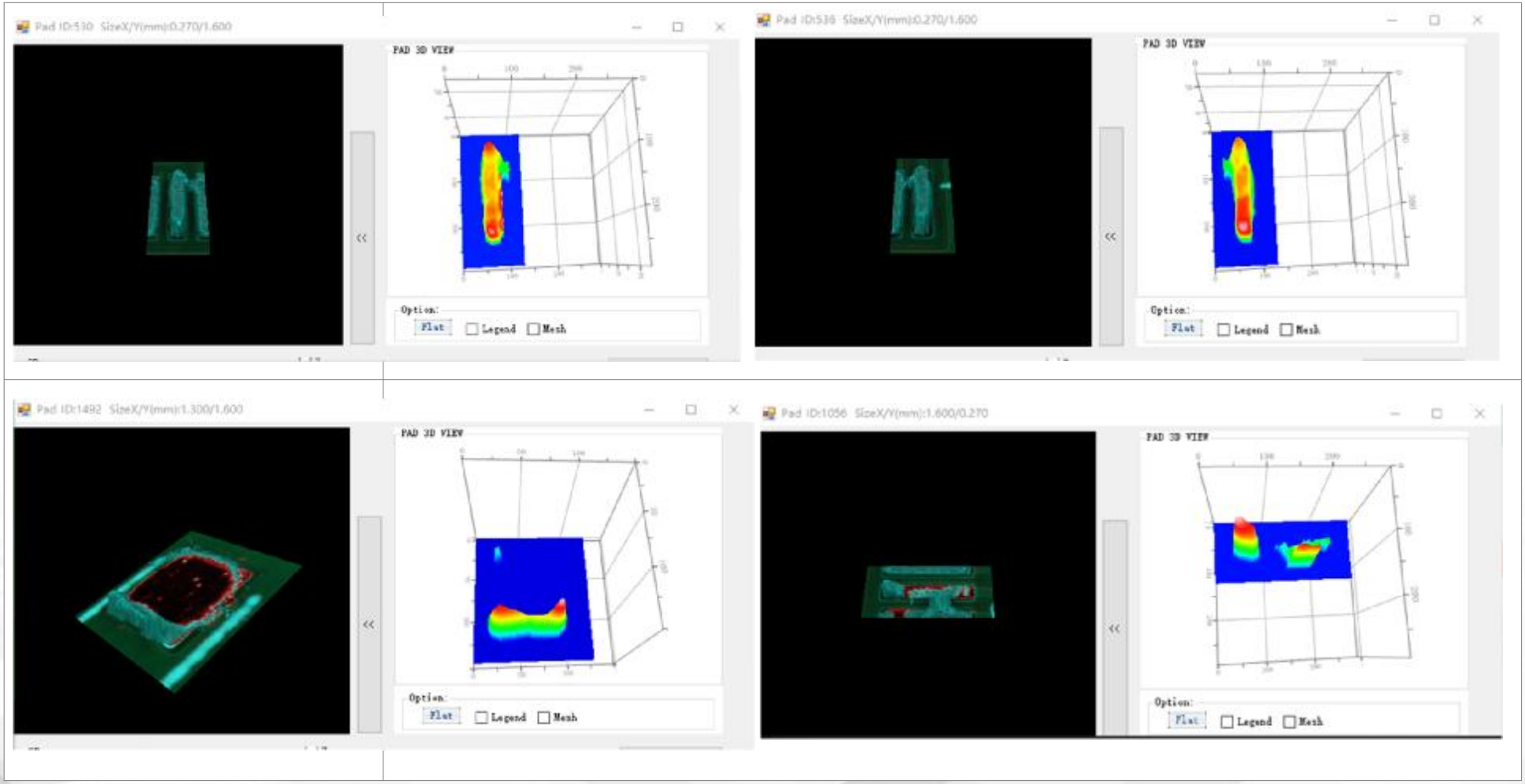
Product Testing Information

B2190 SPI Inspection Result



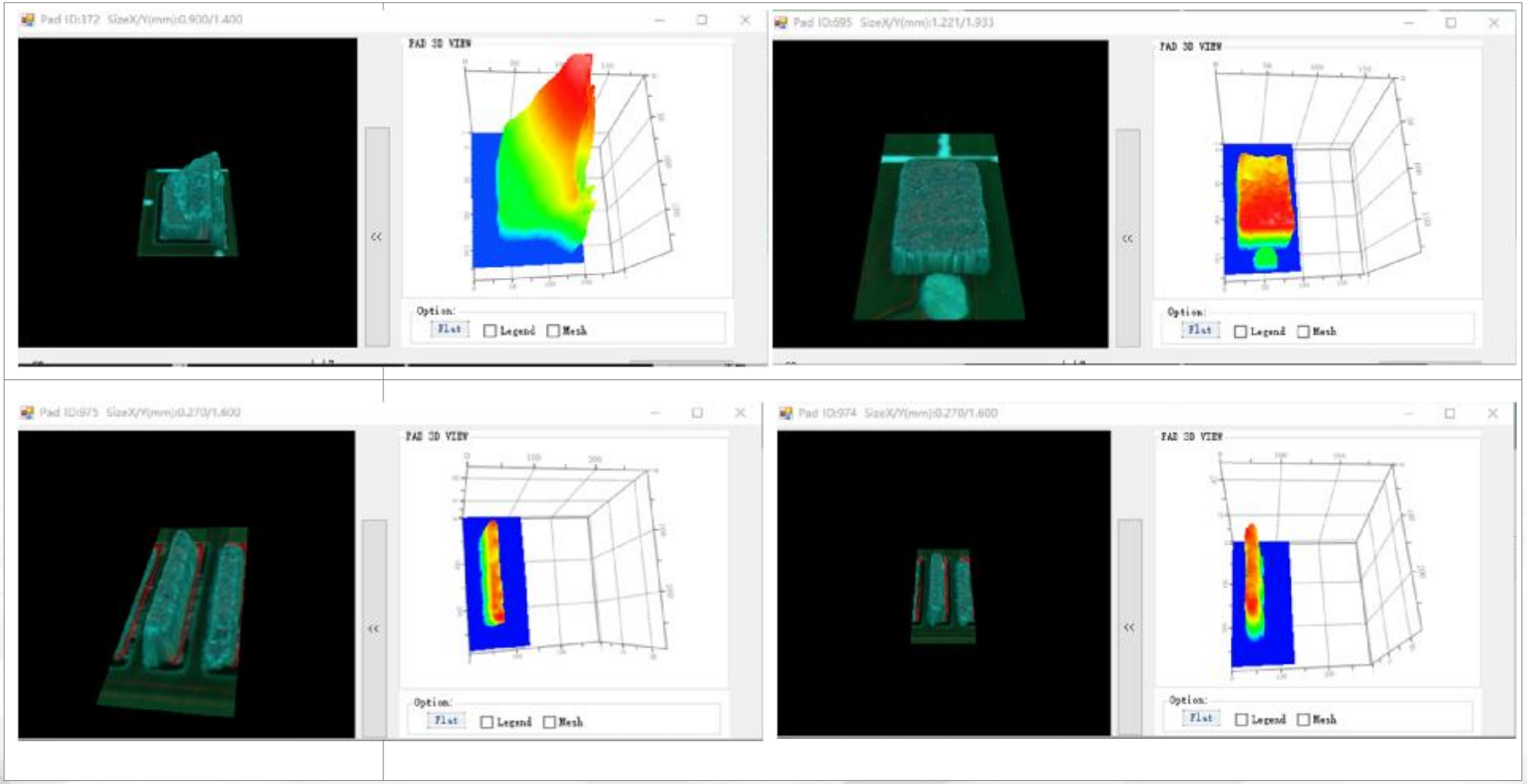
Product Testing Information

B2190 SPI Inspection Result



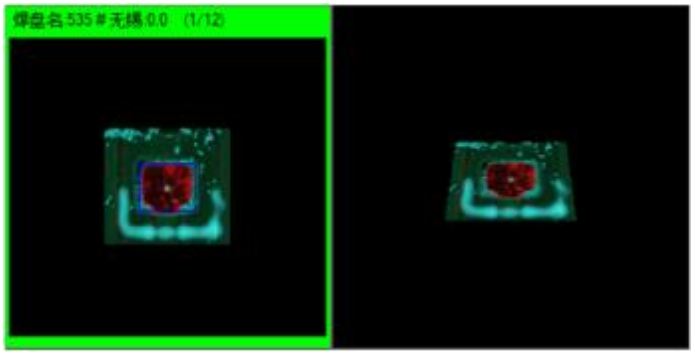
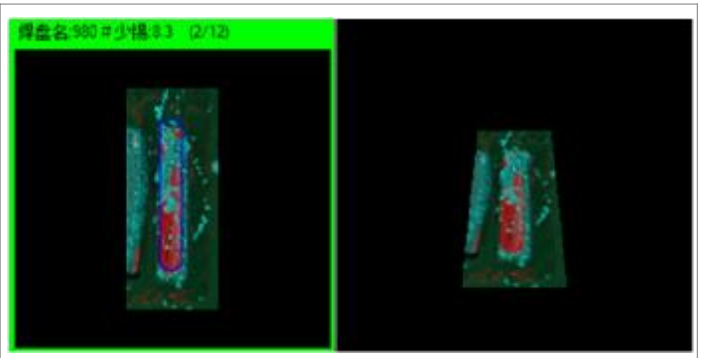
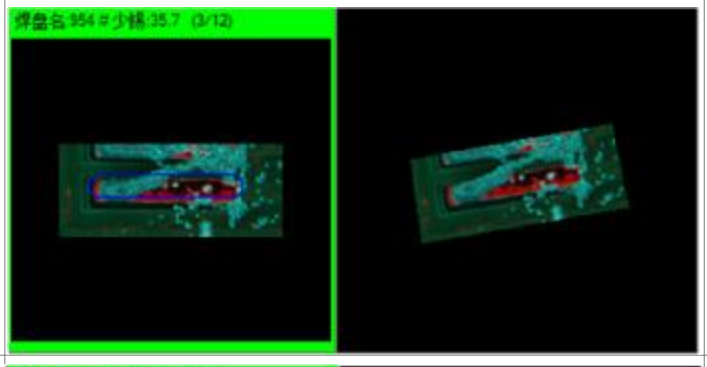
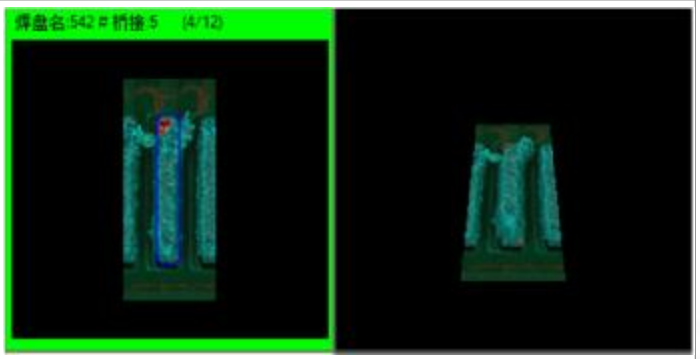
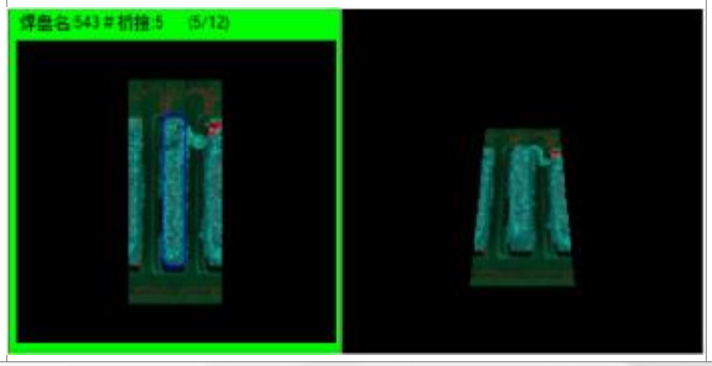
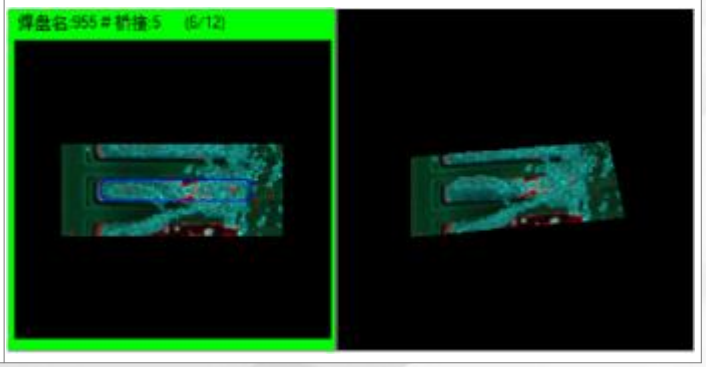
Product Testing Information

B2190 SPI Inspection Result

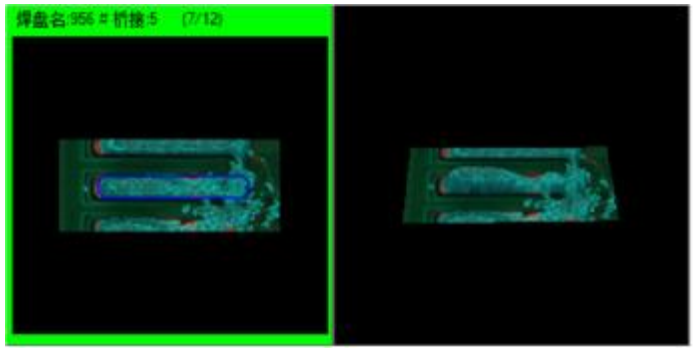
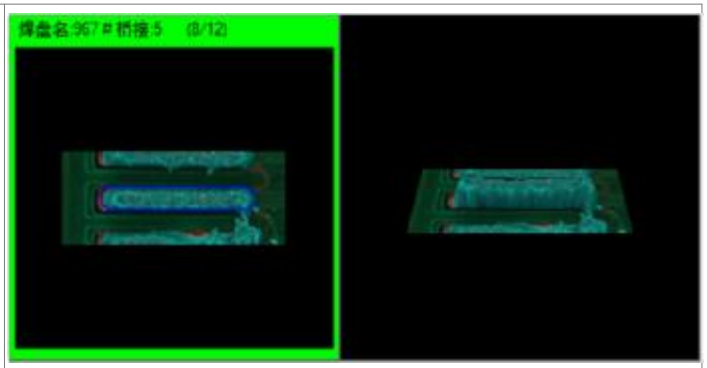
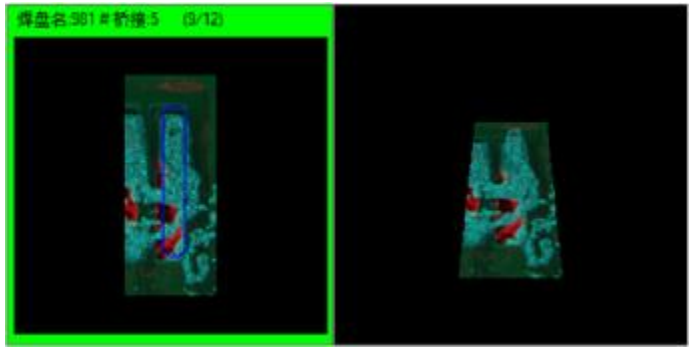
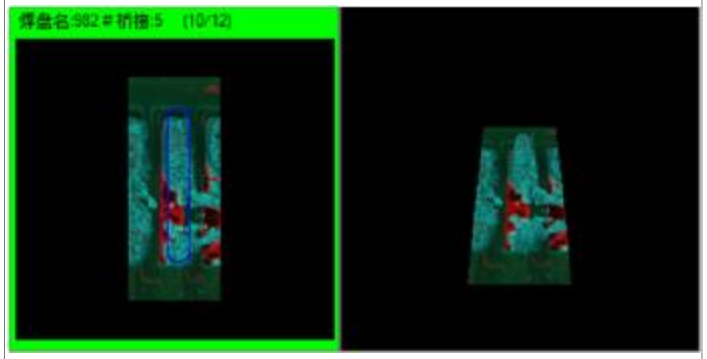
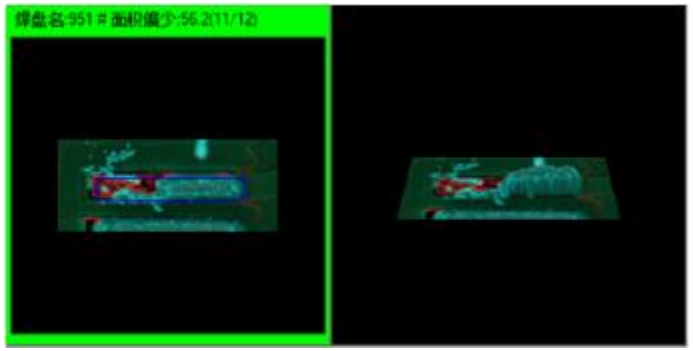
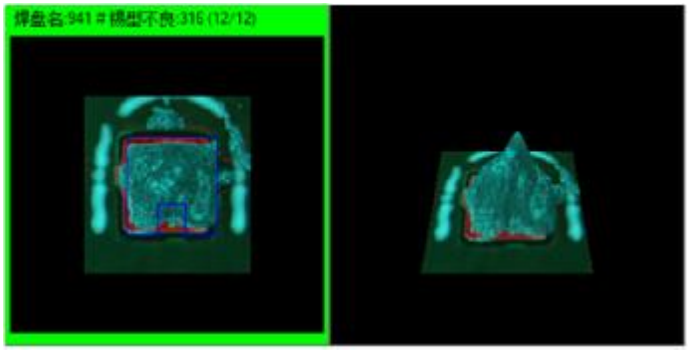


Defective Solder Verify

SPI Inspection Capability Verify

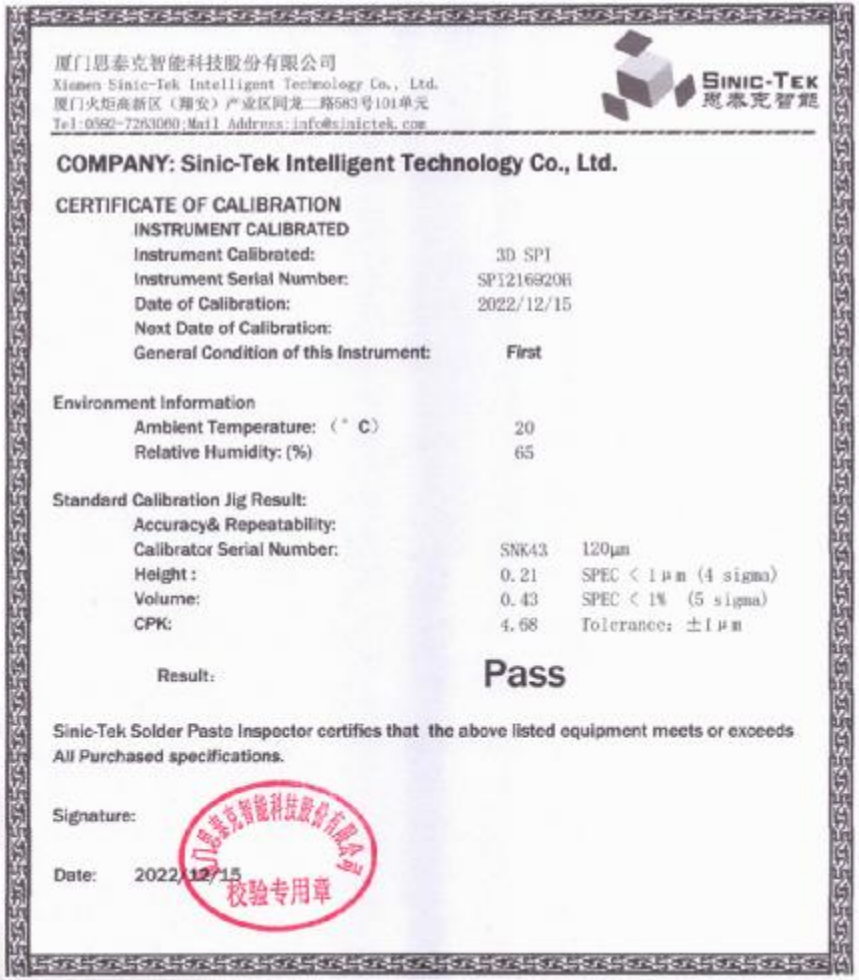
1		2	
3		4	
5		6	

Defective Solder Verify

7		8	
9		10	
11		12	

Device Accuracy Verify

CPK Testing Result CPK=4.68 (Qualify)



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Xiamen Sinic-Tek Intelligent Technology Co., Ltd.
厦门火炬高新区（翔安）产业区同龙二路583号101单元
Tel:0592-7263060;Mail Address:info@sinictek.com

COMPANY: Sinic-Tek Intelligent Technology Co., Ltd.

CERTIFICATE OF CALIBRATION

INSTRUMENT CALIBRATED

Instrument Calibrated:	3D SPI
Instrument Serial Number:	SPI2169206
Date of Calibration:	2022/12/15
Next Date of Calibration:	
General Condition of this Instrument:	First

Environment Information

Ambient Temperature: (° C)	20
Relative Humidity: (%)	65

Standard Calibration Jig Result:

Accuracy& Repeatability:		
Calibrator Serial Number:	SNK43	120μm
Height :	0.21	SPEC < 1μm (4 sigma)
Volume:	0.43	SPEC < 1% (5 sigma)
CPK:	4.68	Tolerance: ±1μm

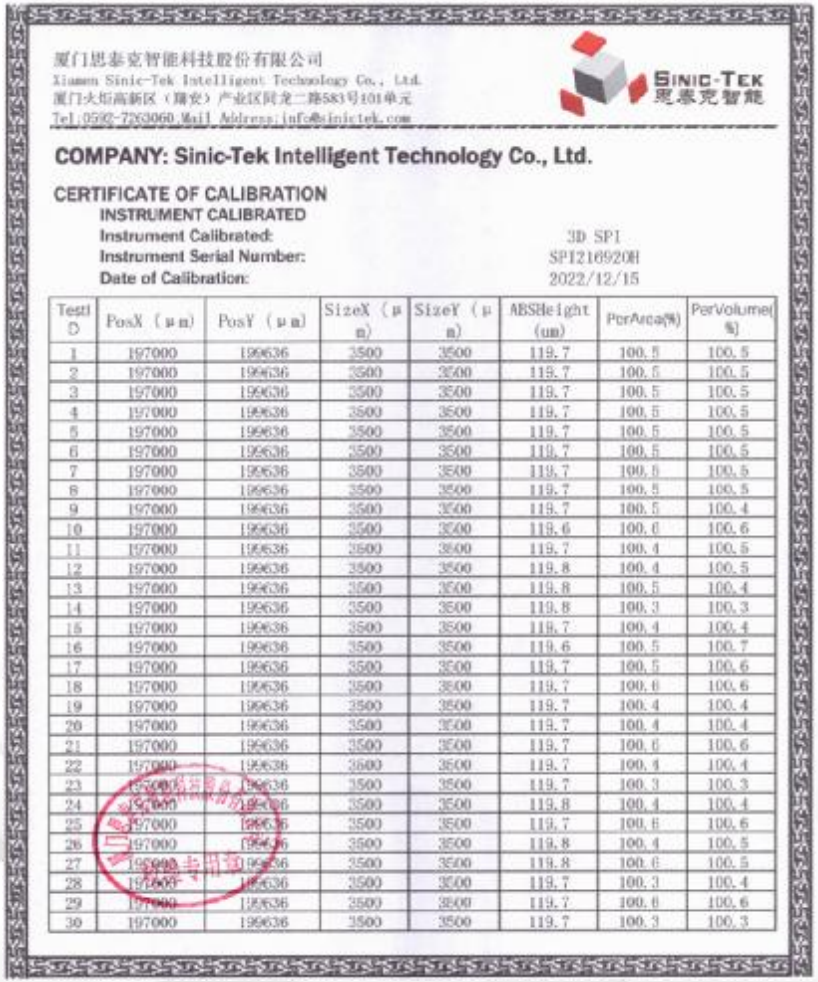
Result: **Pass**

Sinic-Tek Solder Paste Inspector certifies that the above listed equipment meets or exceeds All Purchased specifications.

Signature:

Date: 2022/12/15

校验专用章



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Tel:0592-7263060 Mail Address:info@sinictek.com

COMPANY: Sinic-Tek Intelligent Technology Co., Ltd.

CERTIFICATE OF CALIBRATION

INSTRUMENT CALIBRATED

Instrument Calibrated:	3D SPI
Instrument Serial Number:	SPI2169206
Date of Calibration:	2022/12/15

TestID	PosX (μm)	PosY (μm)	SizeX (μm)	SizeY (μm)	ABSHeight (um)	PerArea(%)	PerVolume(%)
1	197000	199636	3500	3500	119.7	100.5	100.5
2	197000	199636	3500	3500	119.7	100.5	100.5
3	197000	199636	3500	3500	119.7	100.5	100.5
4	197000	199636	3500	3500	119.7	100.5	100.5
5	197000	199636	3500	3500	119.7	100.5	100.5
6	197000	199636	3500	3500	119.7	100.5	100.5
7	197000	199636	3500	3500	119.7	100.5	100.5
8	197000	199636	3500	3500	119.7	100.5	100.5
9	197000	199636	3500	3500	119.7	100.5	100.4
10	197000	199636	3500	3500	119.6	100.6	100.6
11	197000	199636	3500	3500	119.7	100.4	100.5
12	197000	199636	3500	3500	119.8	100.4	100.5
13	197000	199636	3500	3500	119.8	100.5	100.4
14	197000	199636	3500	3500	119.8	100.3	100.3
15	197000	199636	3500	3500	119.7	100.4	100.4
16	197000	199636	3500	3500	119.6	100.5	100.7
17	197000	199636	3500	3500	119.7	100.5	100.6
18	197000	199636	3500	3500	119.7	100.6	100.6
19	197000	199636	3500	3500	119.7	100.4	100.4
20	197000	199636	3500	3500	119.7	100.4	100.4
21	197000	199636	3500	3500	119.7	100.6	100.6
22	197000	199636	3500	3500	119.7	100.4	100.4
23	197000	199636	3500	3500	119.7	100.3	100.3
24	197000	199636	3500	3500	119.8	100.4	100.4
25	197000	199636	3500	3500	119.7	100.6	100.6
26	197000	199636	3500	3500	119.8	100.4	100.5
27	197000	199636	3500	3500	119.8	100.6	100.5
28	197000	199636	3500	3500	119.7	100.3	100.4
29	197000	199636	3500	3500	119.7	100.6	100.6
30	197000	199636	3500	3500	119.7	100.3	100.3

Device Accuracy Verify

GR&R Testing Result　Height GR&R=3.83%　(Qualify)

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COMPANY: Sinic-Tek Intelligent Technology Co., Ltd.

GAUGE R&R ANALYSIS REPORT

Instrument Analysised:	3D SPI
Instrument Serial Number:	SPI216920H
Date of Analysis:	2022/12/15
Sample for analysis:	Testing PCB
Number of PCB:	1pc
Number of pads:	10pads
Analytical method:	ANOVA

	GR&R	Ndc
Height	3.83%	31
Area	4.17%	32
Volume	3.97%	30

Result:　Pass

Note:

The testing PCB is used in the analysis process, and the analysis results are for reference only.

Signature:　校验专用章　Date: 2022/12/15

Device Accuracy Verify

Area GR&R=4.17% (Qualify) Area GR&R=3.97% (Qualify)


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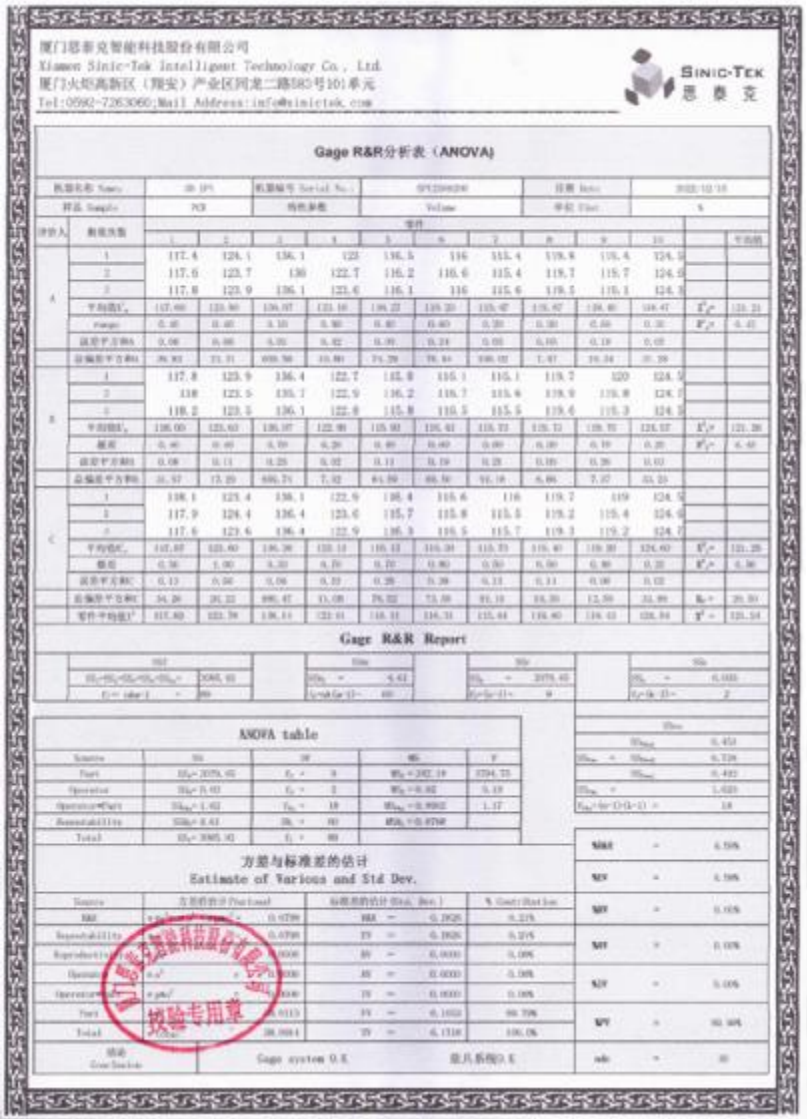
Tel:0592-7263060;Mail Address:info@sinictek.com

Gage R&R分析表（ANOVA）

Gage R&R Report

ANOVA table

方差与标准差的估计
Estimate of Various and Std Dev.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Gage R&R分析表（ANOVA）

Gage R&R Report

ANOVA table

方差与标准差的估计
Estimate of Various and Std Dev.