Product Test Report

Manufacturer：TI

Model / PN：THS4521IDR

Sample Qty.：4 PCS

Date Received：2023/08/10

Approved by： ________ **Checked by：** ________ **Prepared by：** 周子勤

Seal of Testing Center

富泰捷科技发展检测中心
报告专用章

Date Reported： 2023、08、22

1.Test Purpose

The tests are performed to found the root cause of failed samples.

2. Summary of Test Result

No.	Test Item	Sample Qty.	Test Result
1	X-Ray test	3 pcs	No anomaly was found in the internal structure of the sample. The internal structure of the three samples is consistent.
2	IV Cuve Tracer	4 pcs	No abnormal was found.The curves of OK sample and NG samples IV are consistent.
3	SAM Test	3 pcs	Delaminations was found on the Lead frame of the NG1 and NG2 samples.
4	De-cap Test	1 pcs	Suspected burnt marks were found on the die surface. “2008” “TI” die markings were found.
Conclusion: From external visual inspection, we found the bottom and marking of NG samples and OK sample are not the same.No anomaly was found for the IV curve tracer,and the curves of NG samples and OK sample are consistent. Select the tree NG sampls to do SAT ,delaminations was found on the Lead frame of the NG1 and NG2 samples. Do decap for NG2 , Suspected burnt marks were found on the die surface.			

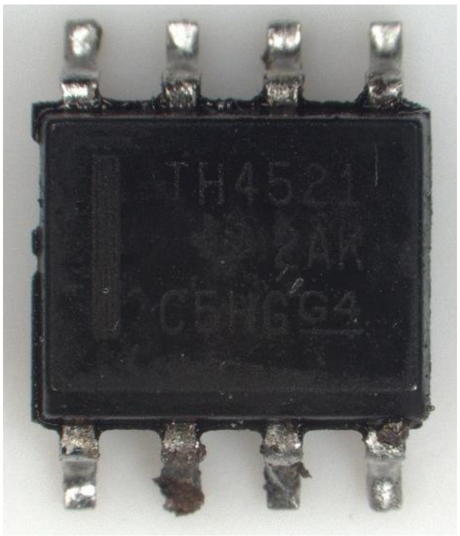
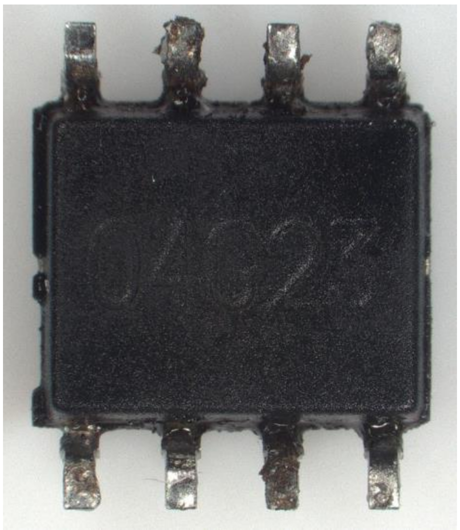
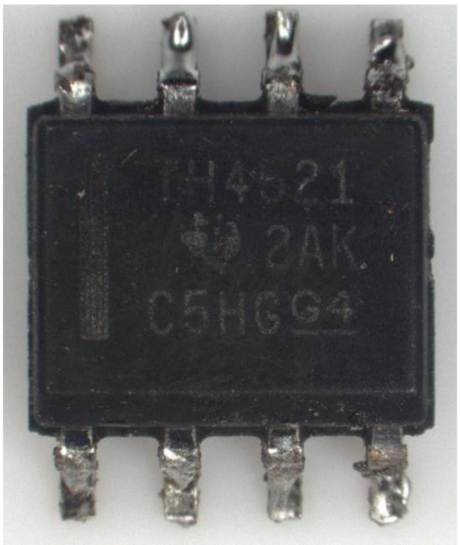
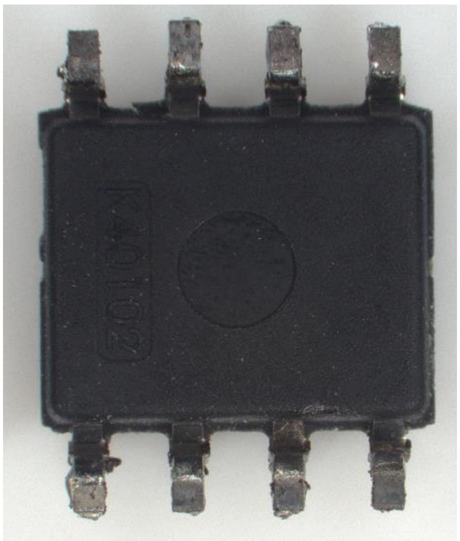
3.Test Equipment

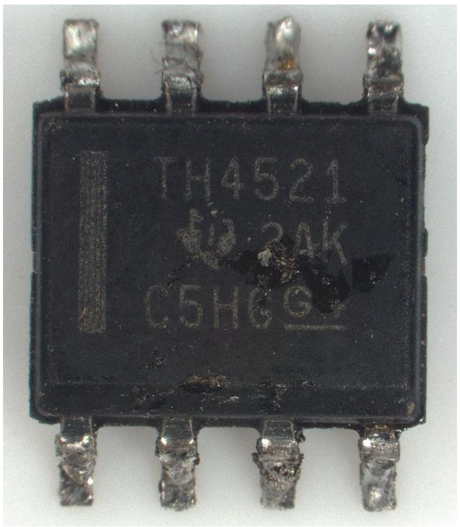
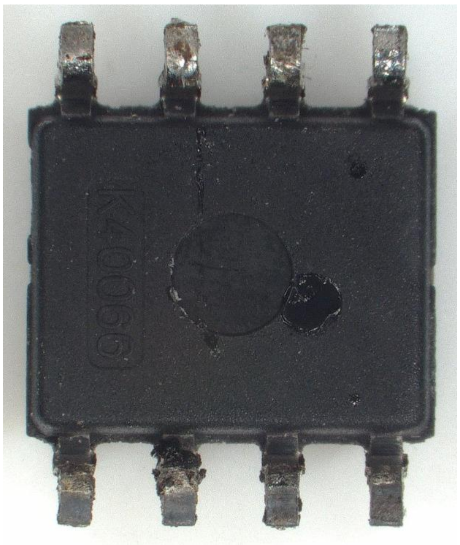
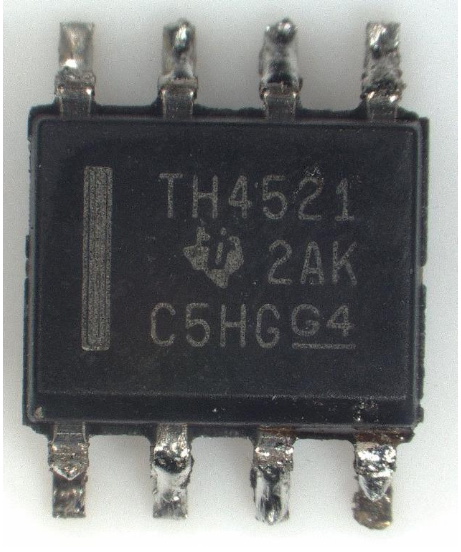
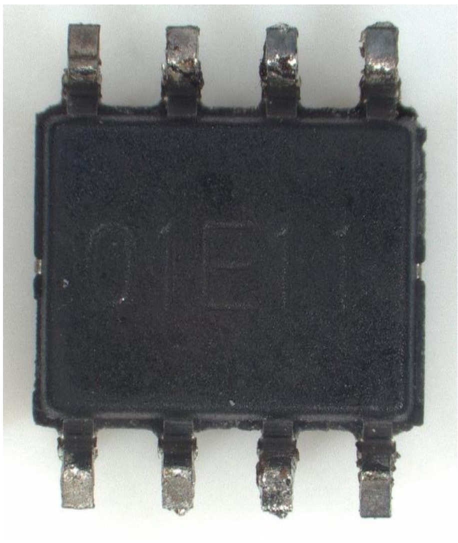
No.	Test Item	**Instrument**	**Model**
1	External Visual Inspection	3D Microscope	VHX-7000
2	X-Ray Test	X-Ray Test Systems	VIEW X1800
3	IV Test	Programmable Curve Tracer	CS-3200
4	SAM	Scanning Acoustic Microscope	SONIX_ ECHO
5	De-cap Test	DECAP Test	JETETCH PRO

4.Laboratory Ambience Condition

Temperature：23.7℃
Relative humidity：56.6%

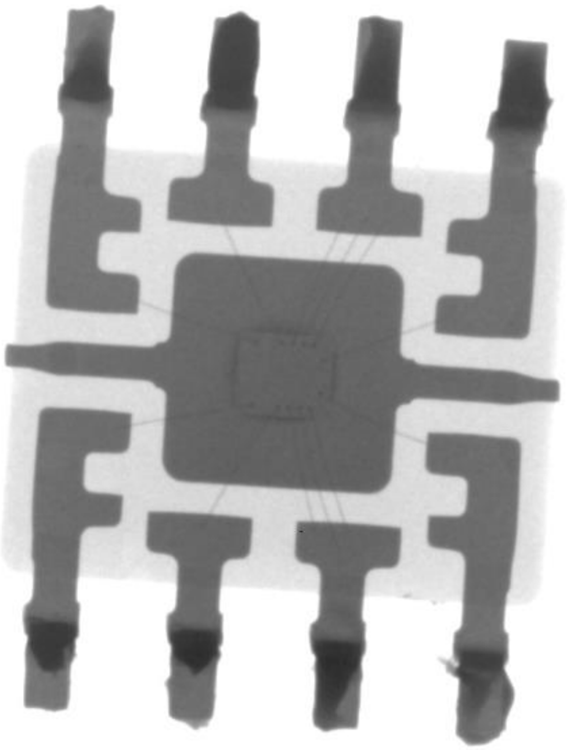
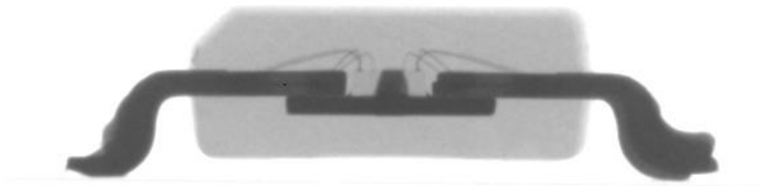
5.Sample Description

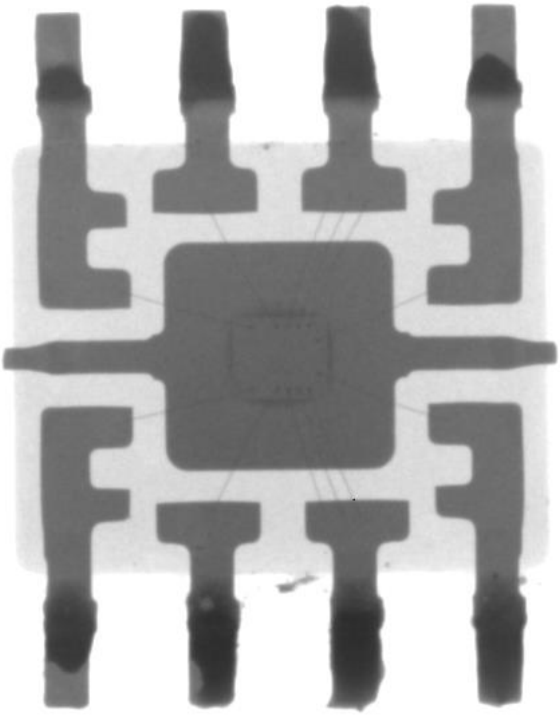
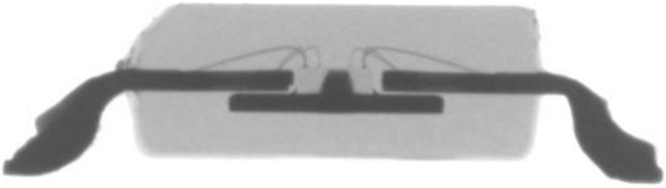
No.	Top view	Bottom view
OK		
NG1		

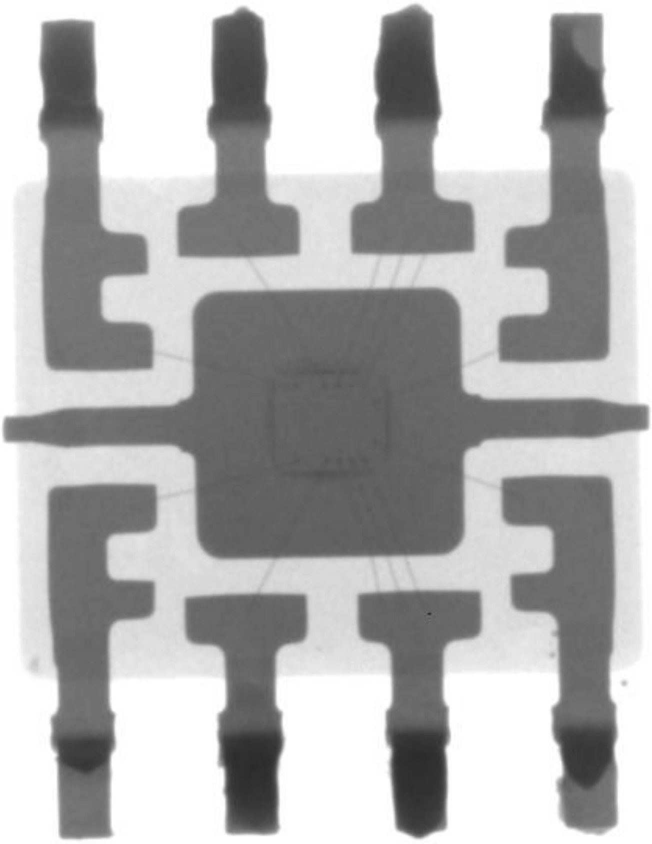
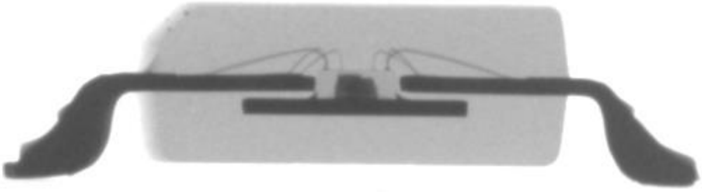
NG2		
NG3		

6. X-Ray Test

6.1Test data

No.	Top View
NG1	
	Side View
	

No.	Top View
NG2	
	Side View
	

No.	Top View
NG3	
	Side View
	

6.2 Test Result

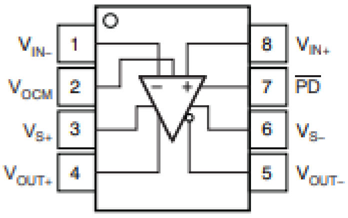
No anomaly was found in the internal structure of the sample. The internal structure of the three samples is consistent.

7. IV Cuve Tracer

7.1 Condition

Equipment: Programmanie curve tracer
Sample size: 4 pcs
Test method: All pin to VS-（pin6）

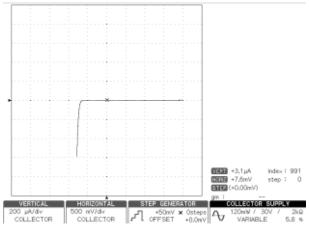
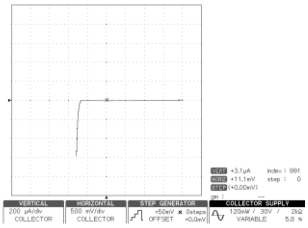
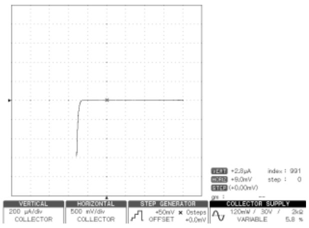
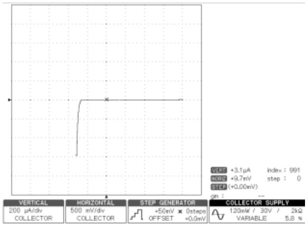
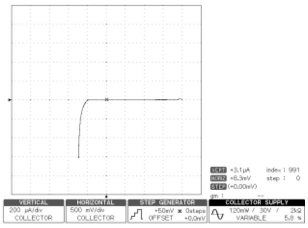
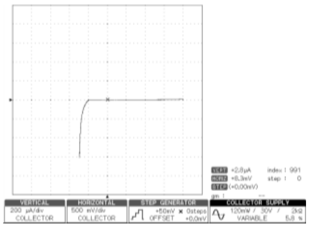
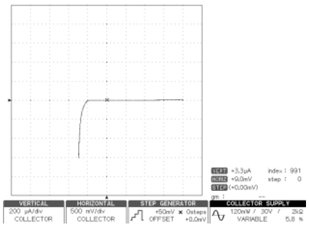
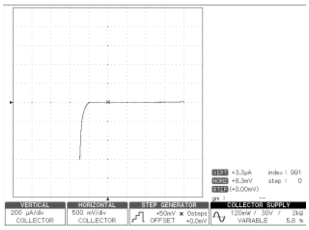
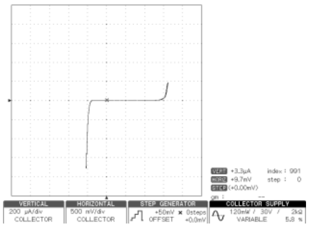
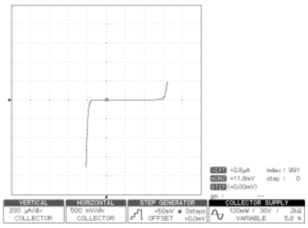
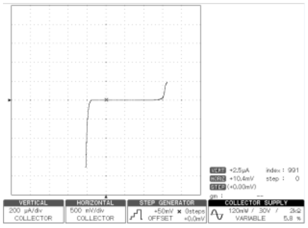
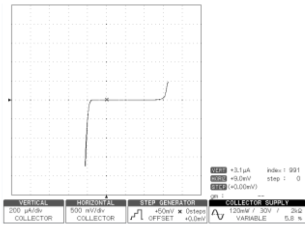
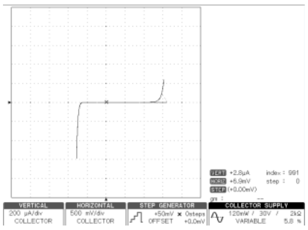
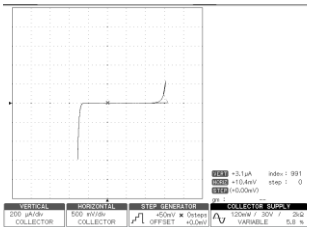
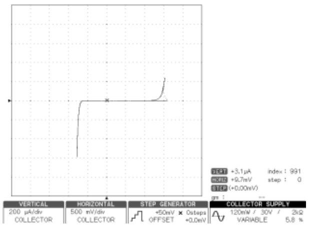
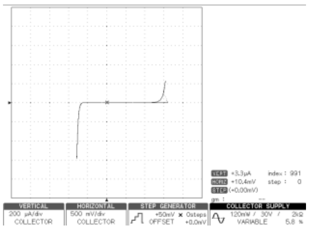
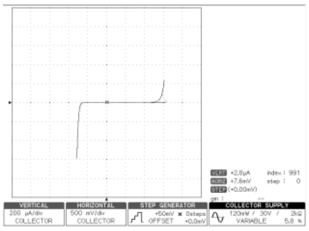
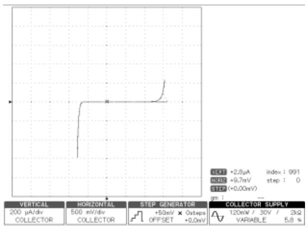
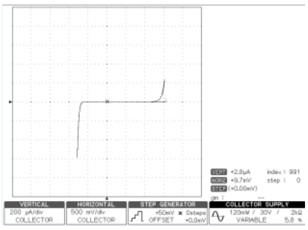
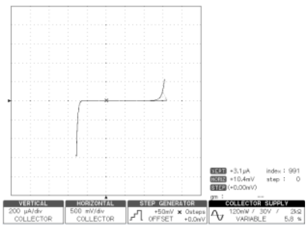
THS4521 D and DGK Package
8-Pin SOIC and VSSOP
Top View

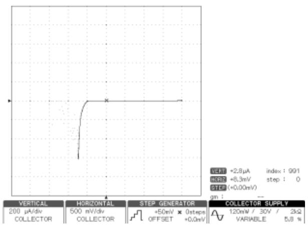
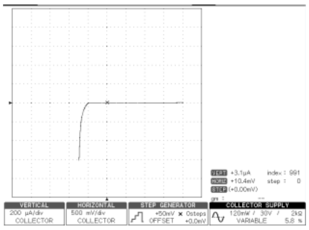
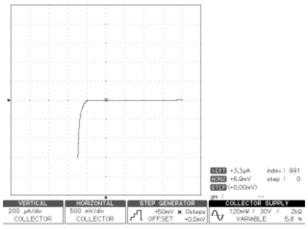
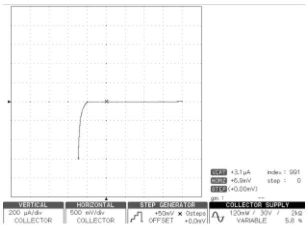
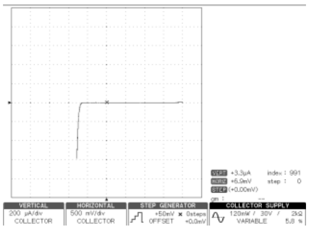
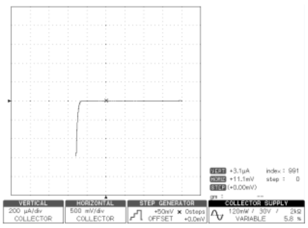
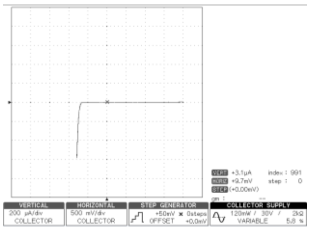
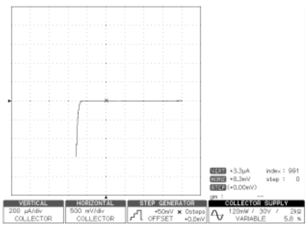


Pin Functions: THS4521

PIN		DESCRIPTION
NAME	NO.	
V_{IN-}	1	Inverting amplifier input
V_{OCM}	2	Common-mode voltage input
V_{S+}	3	Amplifier positive power-supply input
V_{OUT+}	4	Noninverting amplifier output
V_{OUT-}	5	Inverting amplifier output
V_{S-}	6	Amplifier negative power-supply input. Note that V_{S-} is tied together on multi-channel devices.
$\overline{PD}$	7	Power down. $\overline{PD}$ = logic low puts device into low-power mode. $\overline{PD}$ = logic high or open for normal operation.
V_{IN+}	8	Noninverting amplifier input

7.2 Test Data

NO.	OK	NG1	NG2	NG3
Pin1-Pin6				
Pin2-Pin6				
Pin3-Pin6				
Pin4-Pin6				
Pin5-Pin6				

Pin7-Pin6				
Pin8-Pin6				

7.3 Summary

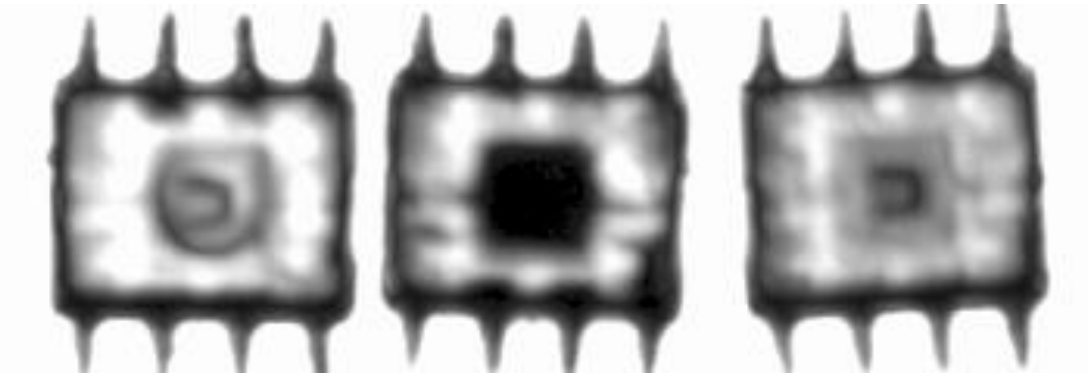
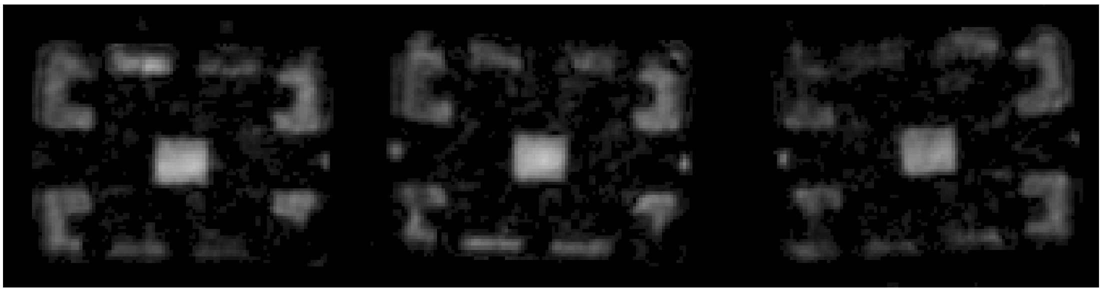
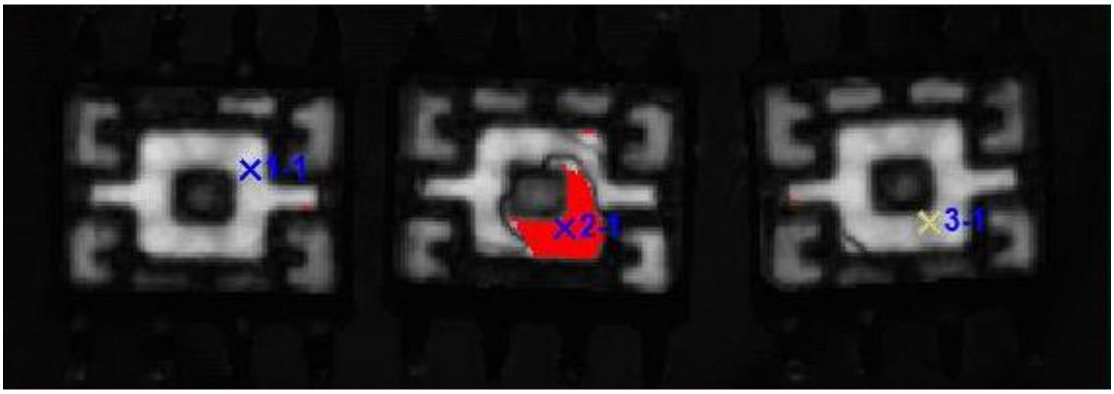
No abnormal was found.The curves of OK sample and NG sample IV are consistent.

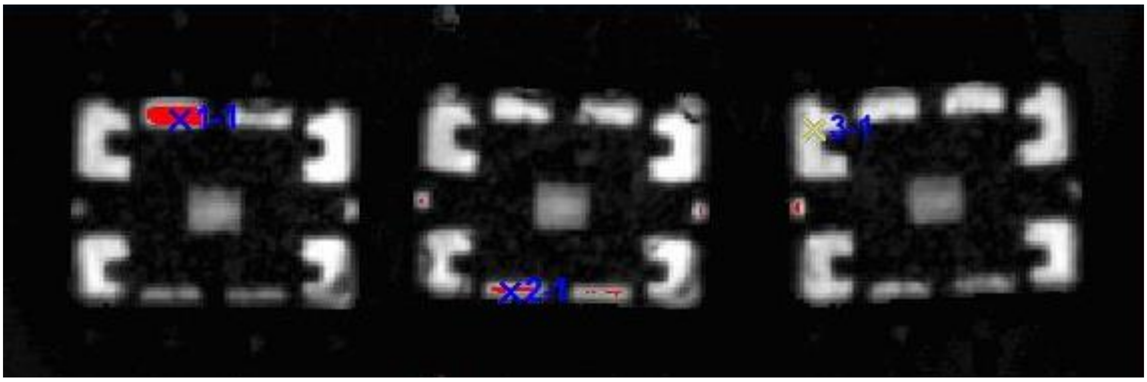
8. SAM Test

8.1 Condition

Equipment: Scanning Acoustic Microscope SONIX_ ECHO
Sample size: 3 pcs

8.2 Test Data

T-SCAN（NG1,NG2,NG3）

C-SCAN((Die surface)) （NG1,NG2,NG3）

C-SCAN(Lead frame) （NG1,NG2,NG3）


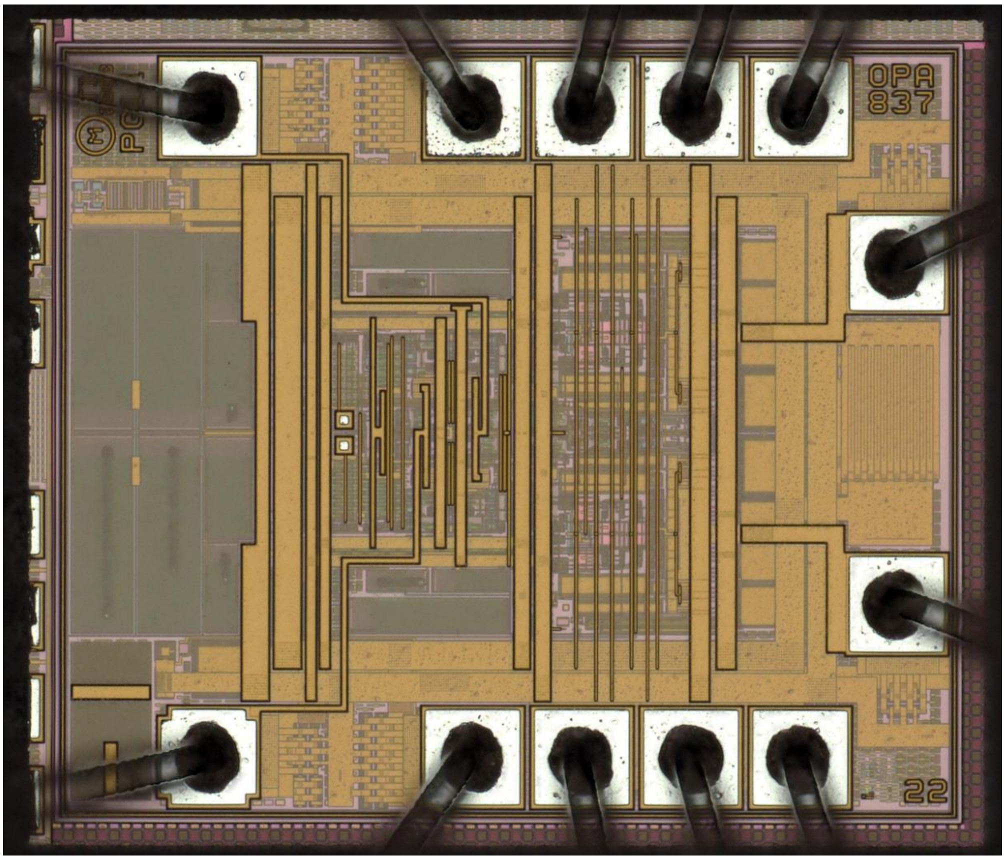


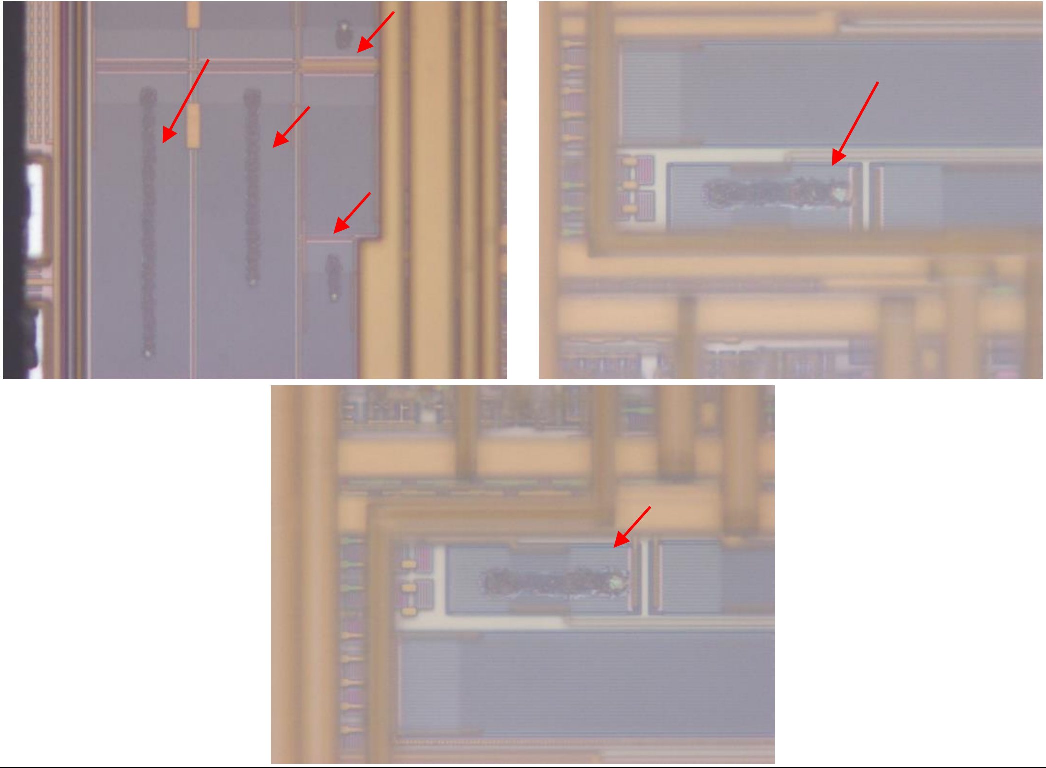
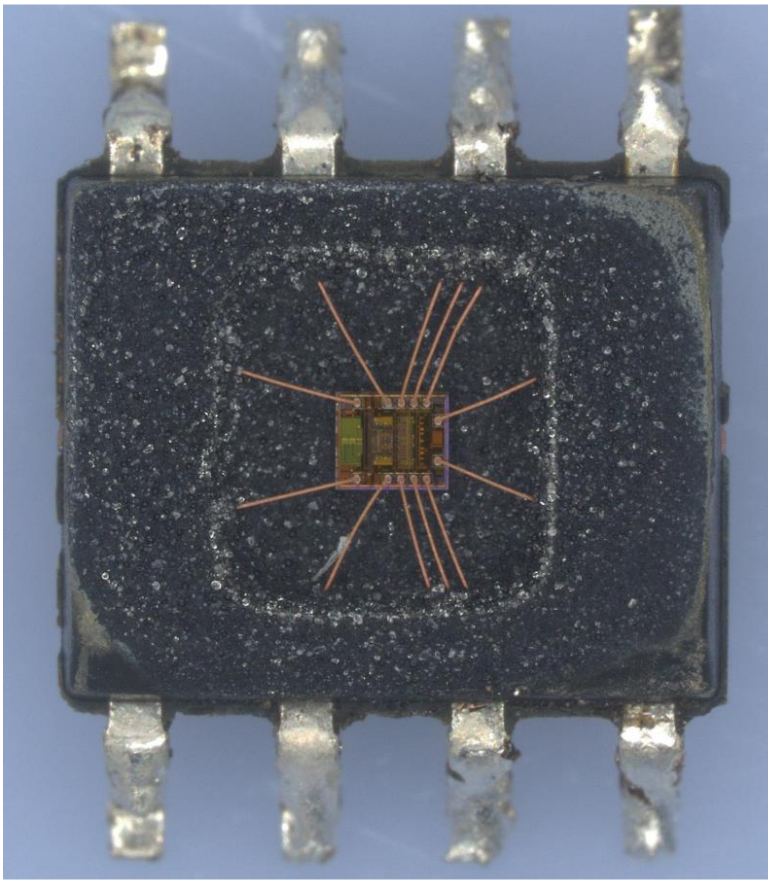
8.3 Summary

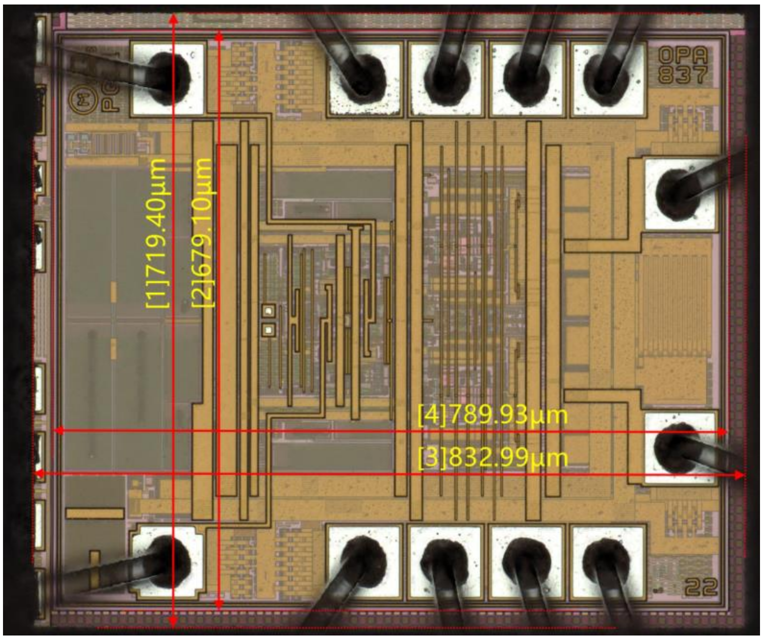
Delaminations were found on the Lead frame of the NG1 and NG2 samples.

9.De-Cap Test

9.1 Test data

NG2	
die	
Logo and die marking	 

Crack	
Whole picture	

Dimension	

9.2 Test Result

Suspected burnt marks were found on the die surface. “2008” “TI” die markings were found.

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*****End*****