Inspection Report

Report No:	KHT-20251020-057	**Sales:**	Daniel Yuan	**Department Of Application**	Sales
Receipt Date:	2025-10-18	**Test Date:**	2025-10-18	**Report Date:**	2025-10-20
Inspector:	Wade	**Approved by:**	David	**Approved by:**	Jan Guo

Sample Information					
Part Number:	XC18V512SO20C	**Package Type:**	SOP20	**D/C:**	0413+
Package Carrier:	TUBE	**Manufacturer:**	XILINX	**MSL:**	1
Quantity Received:	125pcs	**Quantity Inspected:**	5pcs	**PO Number:**	50471
Incoming information ： The goods are delivered in tubes. Have no original packaging and original labels, The packing and tape show no damage, no popping or other abnormal phenomena.					

Test Content			
Report Summary:	**Details:**	**Risk Level:**	
Inspection Items	**Reference Standards**	**Results**	**Notes**
1.External Visual Inspection			
1.1 Product Information	AS6081 IDEA-STD-1010-B	PASS	
1.2 Surface Analysis		PASS	
1.3 Pin Plating Analysis		PASS	
1.4 Aceton Inspection		PASS	
1.5 Device Dimension Measurement	Device Datasheet	PASS	
2.X-RAY Test			
2.1 X-Ray Internal Structure Inspection	GJB548B-2005	PASS	
3.Solderability Test			
3.1 Solderability Test	IPC J-STD-002D/2C	/	
4.De-cap Die Analysis			

4.1De-cap Die Analysis	GJB 4027A-2006	PASS	
5.SEM & EDS Analysis			
5.1 Microstructure Analysis	JY/T 0584-2020	/	
5.2 Pin Material Analysis	GB/T 17359-2012	/	
6.RoHS Test			
6. 1 RoHS Test	RoHS Order	FAIL	
7.IV Test/Electrical Performance Test			
7.1 IV Test/Electrical Performance Test	Datesheet	/	
8.XRF Analysis			
8.1 Coating Thickness Analysis	Datesheet	/	
9.C-SAM Analysis			
9.1 Ultrasonic Inspection	IPC/JEDEC J-STD-035:1999	/	

Conclusion and Suggestions	
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Conclusion:	Incoming 125pcs for the same batch，5pcs were detected by sampling detection method， EVI passed, X-RAY test passed, De-cap Die Analysis pssed, RoHS Test failed .
Suggestions:	

Notes and Disclaimers:

1. The report is invalid without the signature of the quality inspector and QC supervisor.

2. No part of this publication may be reproduced, altered or distributed publicly in any form or by any means without the prior written permission of Kehuite Technology Development Limited.

3. Any questions about the goods, please contact the corresponding salesman.

Datasheet:

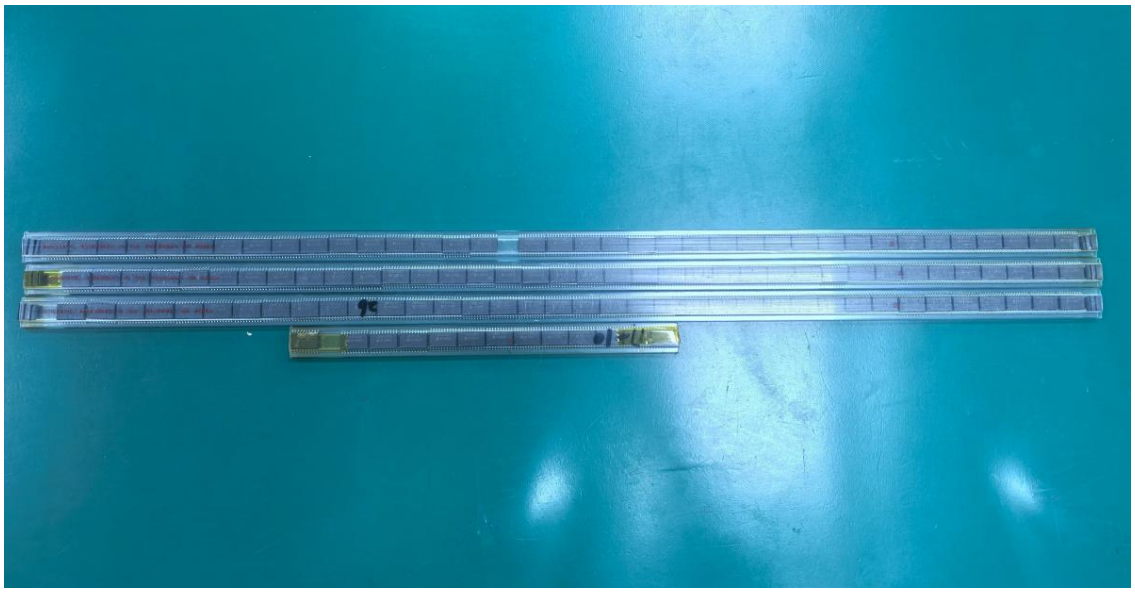
https://docs.amd.com/v/u/en-US/ds026

1.External Visual Inspection

1.1 Product Information

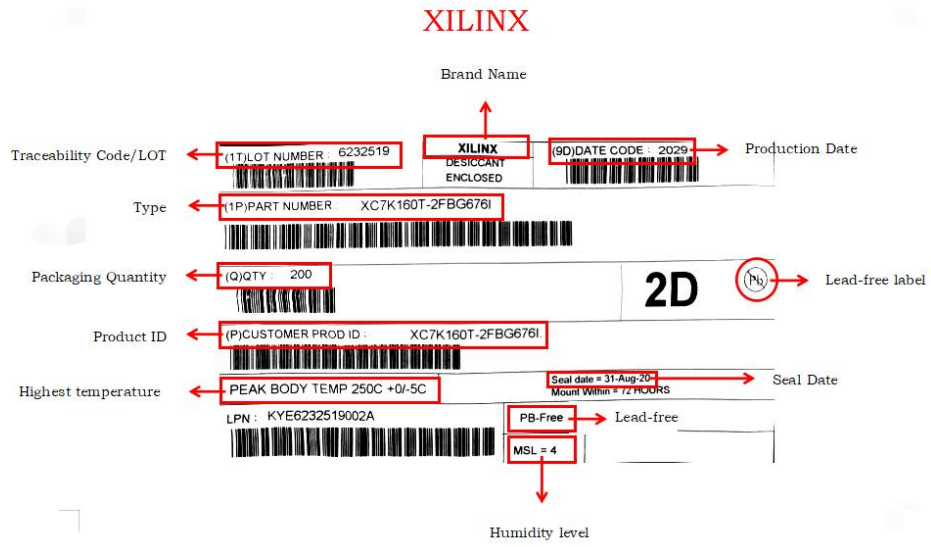
- **Packaging or label inspection of the samples are as follows:**

Labels are clear, no alterations, label information checks out; typed versions, typography, etc. conform to original factory characteristics.



Arrival picture Fig1

Arrival label Fig2

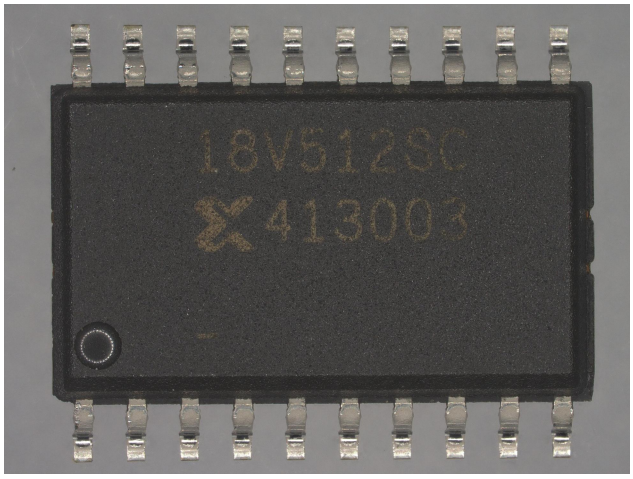


Tag schema Fig3

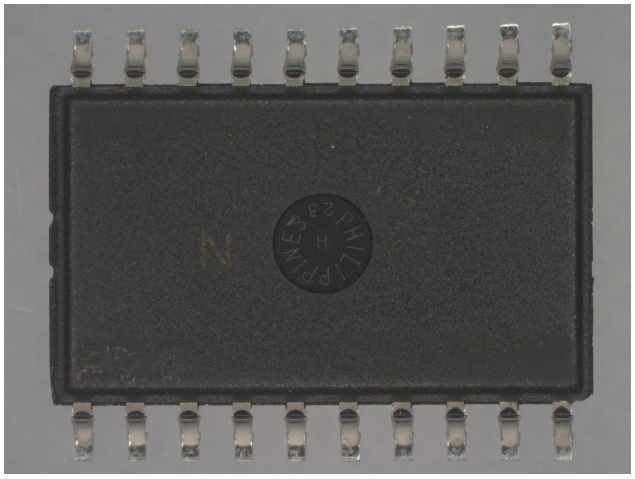
1.2 Surface Analysis

- **The comparison specifications for the sampled samples show the following results:**

  Marking , typing version, typesetting and other comparison is consistent, chip packaging is not abnormal.

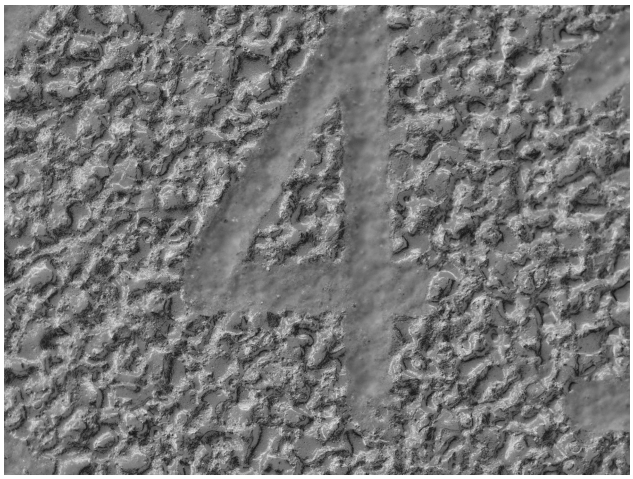


Top View Fig4

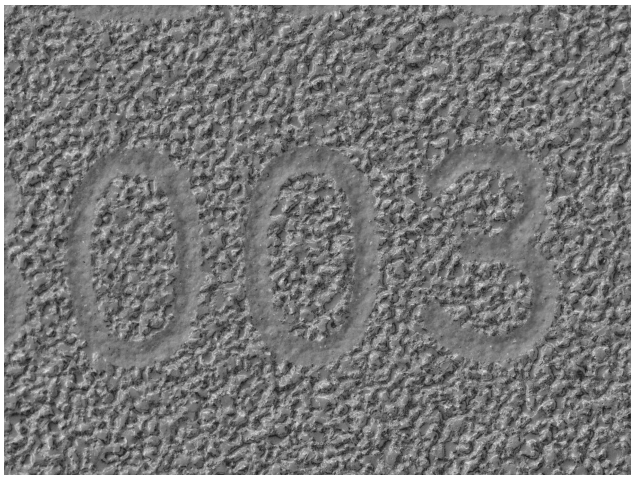


Bottom View Fig5

The marking on the surface of the sample is clear, the granularity is obvious, the shape of the marking is regular, and there is no trace of secondary polishing;



Sample Marking Fig6



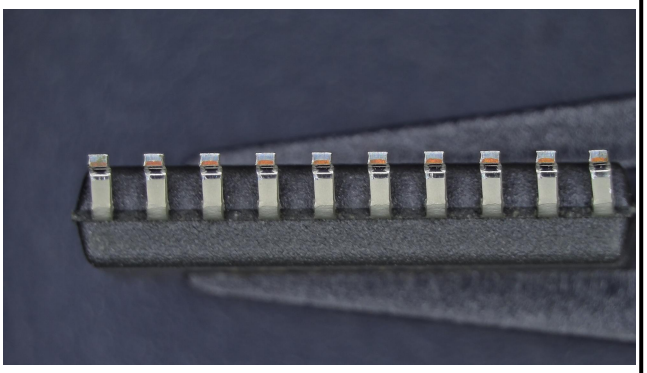
Opt-SEM Fig7

1.3 Pin Plating Analysis

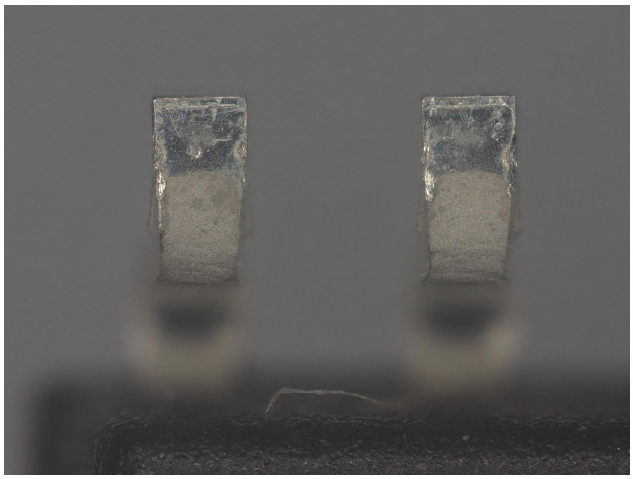
• Analysis of the sampled samples for inspection of the pin coating showed the following results:

The tin on the pin is uniform without abnormal, the cross-section of the exposed copper substrate is a normal phenomenon, there is no obvious sanding characteristics, the overall condition is good.

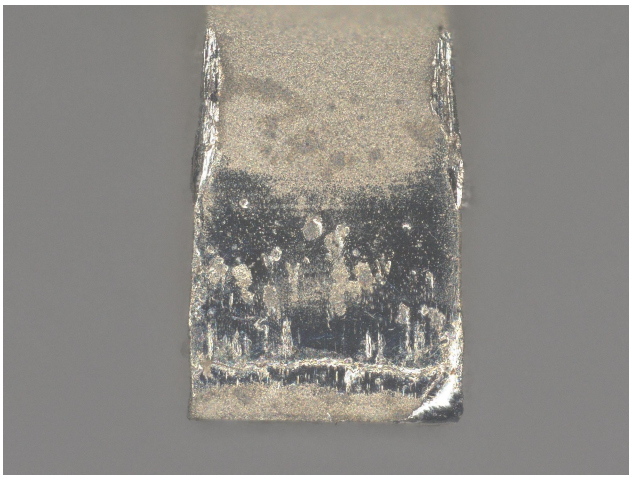
Top View of Pin Fig8



Pin Cross-section Fig9



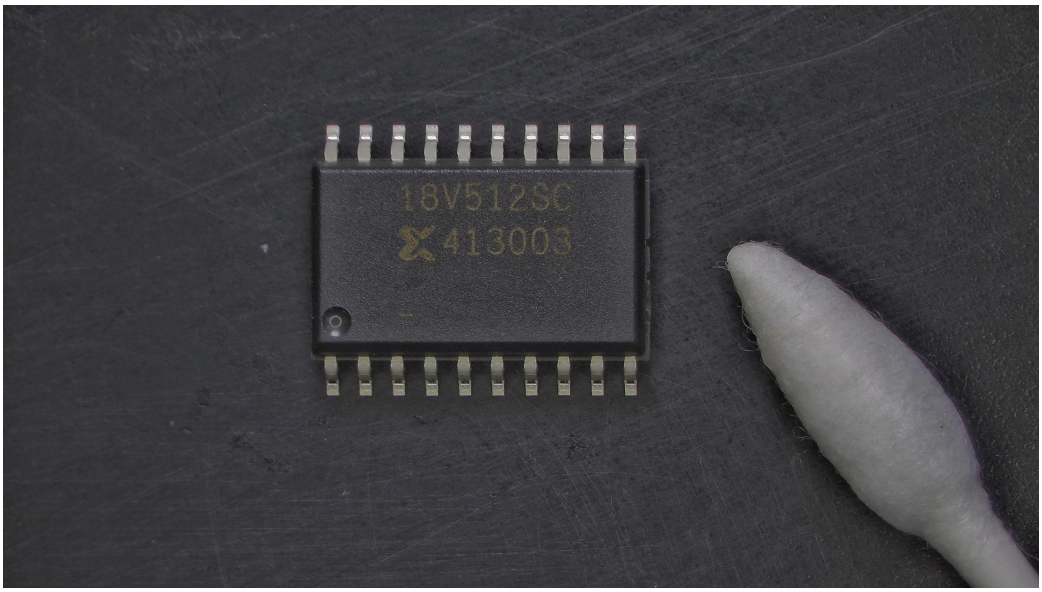
Bottom View of Pin Fig10



Bottom View of Pin Fig11

1.4 Aceton Inspection

After the surface and side of the sample were wiped back and forth with acetone for 3 times, the mark was still clearly visible, there was no obvious secondary coating, and the cotton swab was not blackened and other abnormal phenomena.



Acetone Test Fig12

1.5 Dimension Measurement

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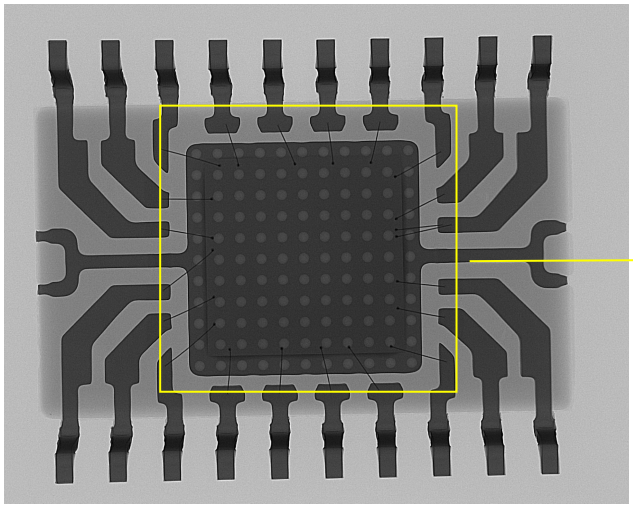
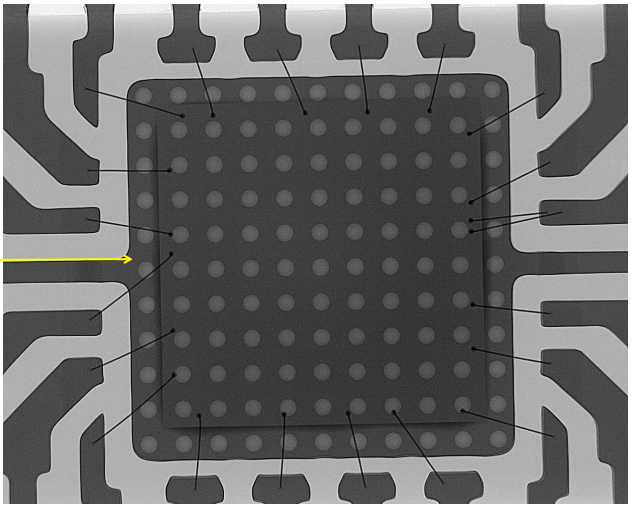
2.X-Ray Inspection

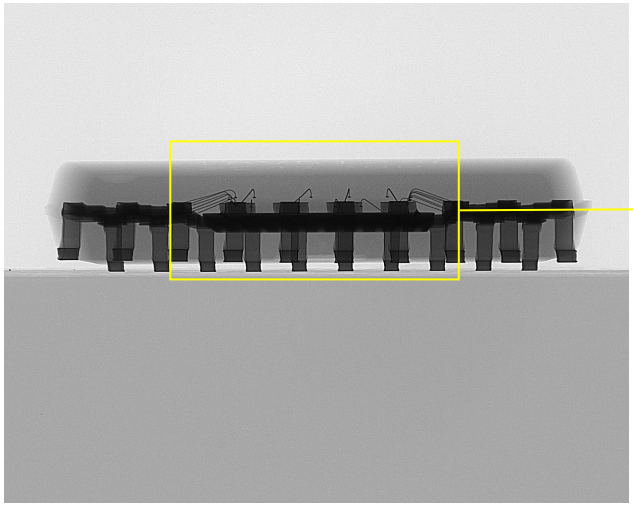
• X-RAY: The internal structure of the sample is intact， the interface at the output terminal well welded， there were no abnormalities such as broken wires or crossings in the inner coils.



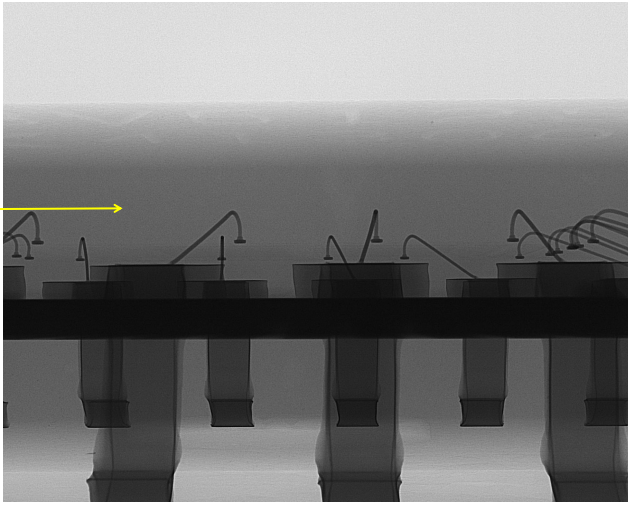
Top View Fig13



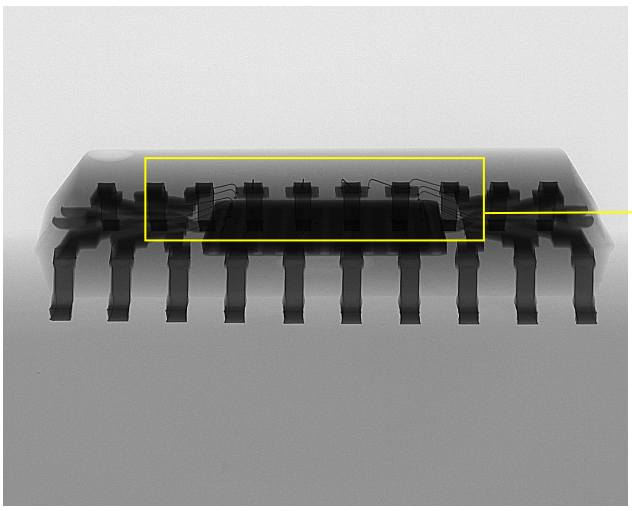
Top View Fig14



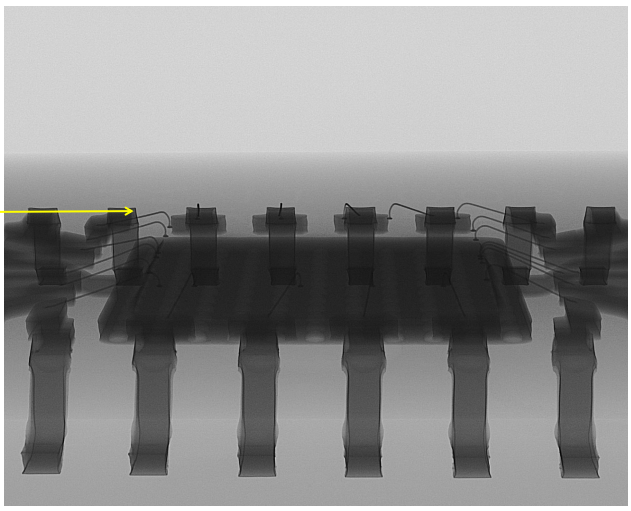
Side View Fig15



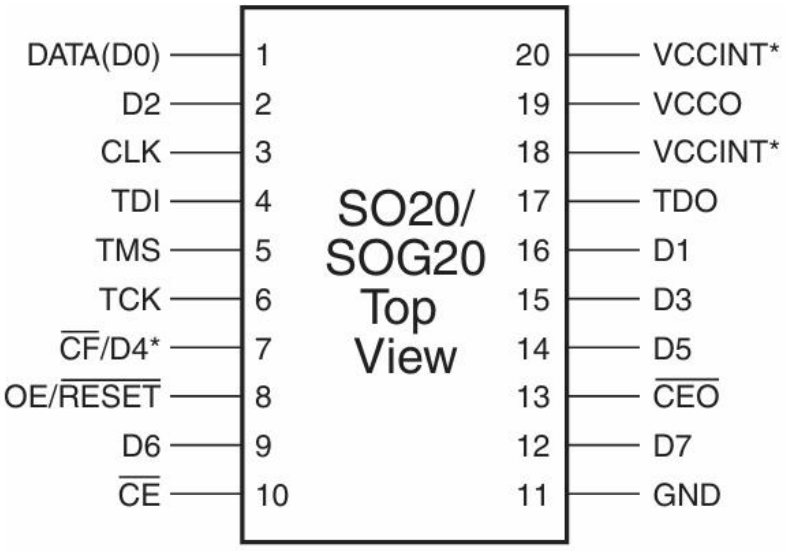
Side View Fig16



Side View Fig17



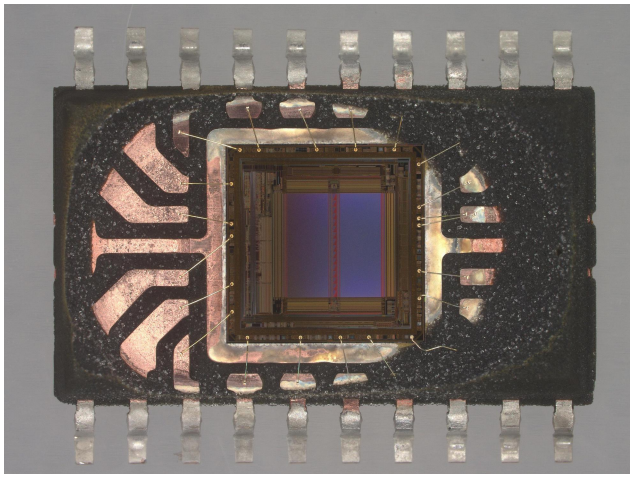
Side View Fig18



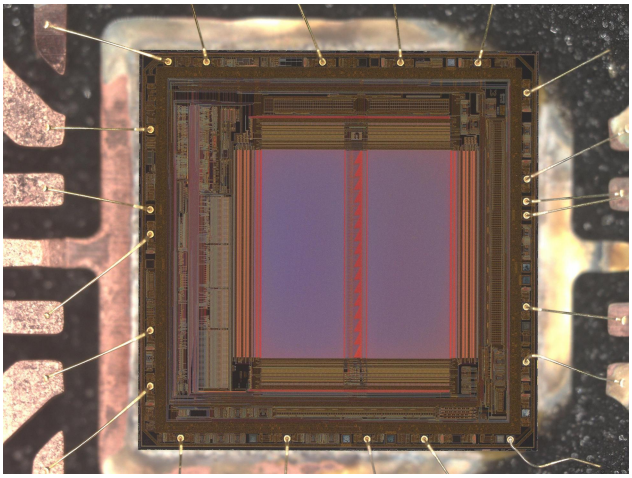
Pin Functions Fig19

3.De-cap Die Analysis

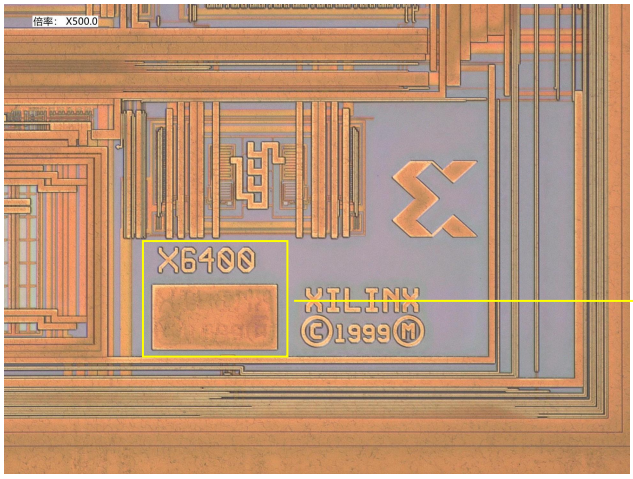
• De-cap die analysis according to the standard , After opening the die, it was found that the internal structure was complete , The inside of the wafer displays information such as "X6400" “XILINX”, It is judged to be made by the original factory.



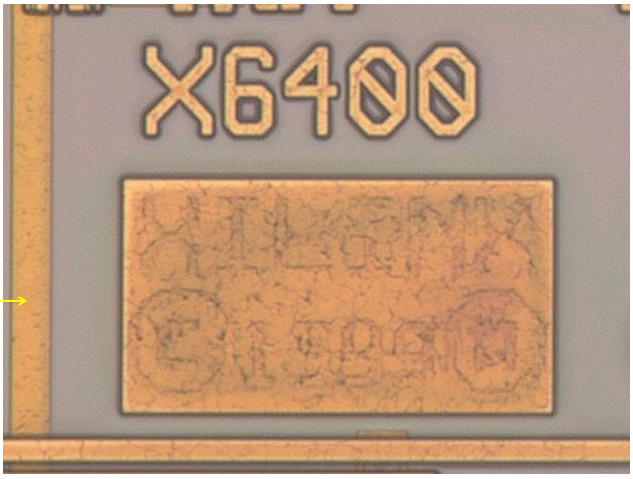
Wafer architecture Fig20



Wafer architecture Fig21



Wafer information Fig22



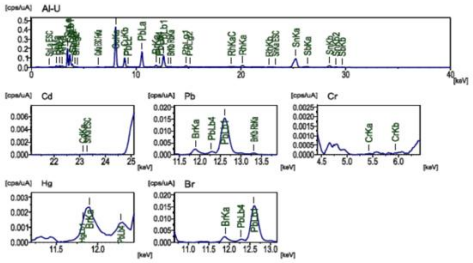
Wafer information Fig23

4.RoHS Test

样品信息		
样品名称	1	[样品图像]
分析组	1mm	
材质	Sn	

结果						
方法	IEC 62321-3-1:2013 by EDX-7200					
元素	镉(Cd)	铅(Pb)	汞(Hg)	总铬(Cr)	总溴(Br)	氯(Cl)
含量(ppm)	ND	44552.8	ND	ND	7433.0	----
标准偏差(ppm)	345.7	6009.9	3379.8	33.5	1424.6	----
判断	IN	NG	IN	OK	NG	----

X-ray 谱图



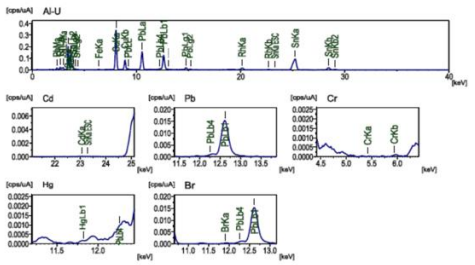
[备注] "OK"表示合格
"ND"表示未检出；"NG"表示大于控制要求，需要进行化学测试；
"IN"表示不确定数值，需要进行化学测试；"----"表示不涉及；

Fig24

样品信息		
样品名称	2	[样品图像]
分析组	1mm	
材质	Sn	

结果						
方法	IEC 62321-3-1:2013 by EDX-7200					
元素	镉(Cd)	铅(Pb)	汞(Hg)	总铬(Cr)	总溴(Br)	氯(Cl)
含量(ppm)	325.0	58807.3	1940.1	ND	1060.8	----
标准偏差(ppm)	466.9	8467.5	2022.2	30.0	414.3	----
判断	IN	NG	IN	OK	IN	----

X-ray 谱图



[备注] "OK"表示合格
"ND"表示未检出；"NG"表示大于控制要求，需要进行化学测试；
"IN"表示不确定数值，需要进行化学测试；"----"表示不涉及；

Fig25

5.List of Test Equipments

NO.	Inspection Item	Type of Equipment	Proofreading Period
1	Video microscope	SWG-N714	2025.04.09~2026.04.08
2	X-Ray	ZM-X5600	2025.04.09~2026.04.08
3	Digital Caliper	Mitutoyo 0-150mm	2025.01.08~2026.01.07
4	3D microscope	VHX-7000	2025.04.09~2026.04.08
5	Tin furnace	QUICK100-15S	2025.04.09~2026.04.08
6	Chemical unpacker	RKD motor-Lithium etching7000	2025.03.18~2026.03.17
Operation Environment		Temperature:15℃~35℃,humidity:30%～60%RH	