Inspection Report

Report No:	KHT-20250220-007	**Sales:**	Wendy	**Department Of Application**	Sales
Receipt Date:	2025-02-17	**Test Date:**	2025-02-17	**Report Date:**	2025-02-20
Inspector:		**Approved by:**		**Approved by:**	

Sample Information					
Part Number:	RTL8305SC-LF	**Package Type:**	QFP128	**D/C:**	24+
Package Carrier:	Tray	**Manufacturer:**	REALTEK	**MSL:**	3
Quantity Received:	400pcs	**Quantity Inspected:**	5pcs	**PO Number:**	PO13 2 2025 KEHUITE
Incoming information:Incoming goods are packed in trays，400pcs in total.No original packaging and original labels，no abnormality such as damage or wetting.					

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	/	
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 400pcs for the same marking. Check the appearance of the chips one by one， no significant abnormalities were observed；5pcs were detected by sampling detection method，EVI passed, X-RAY test passed,De-cap Die analysis passed.
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.

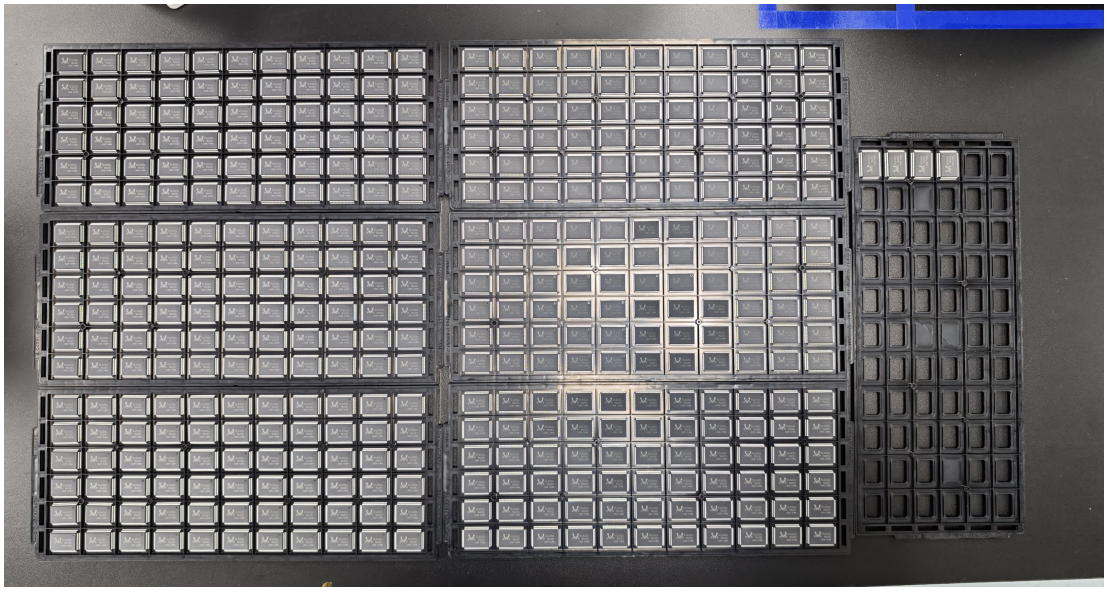
Datasheet:
https://item.szlcsc.com/datasheet/RTL8305SC-LF/141077.html?spm=sc.gb.xds.a___sc.hm.hd.ss&lcsc_vid=QVhdX1ReTlJaVwdRFlRXUFNUTgVdAlcHFFFfVFMAR1IxVlNVTlhaUVNSQFdYVDtW

1.External Visual Inspection

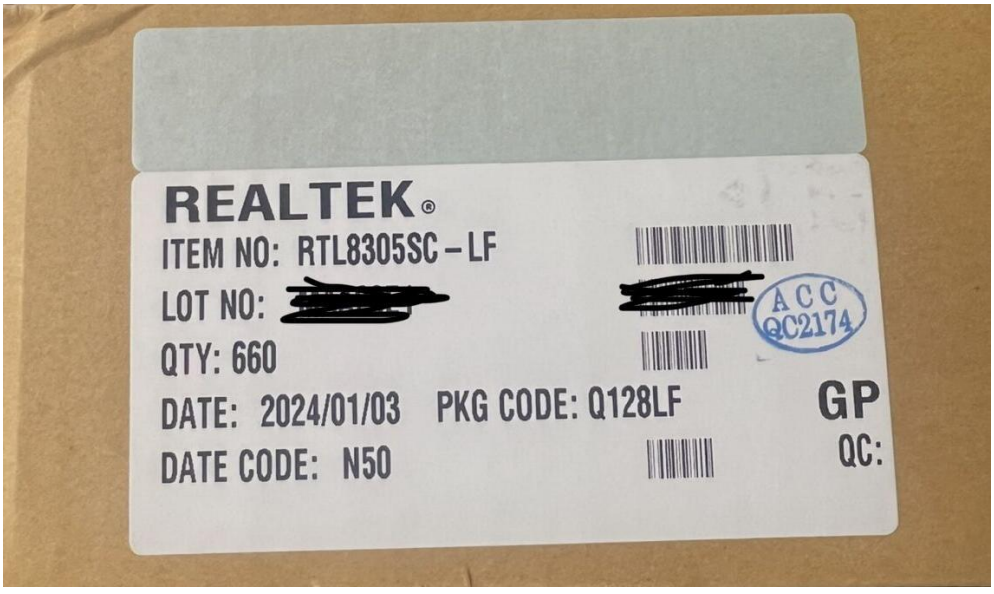
1.1 Product Information

- **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



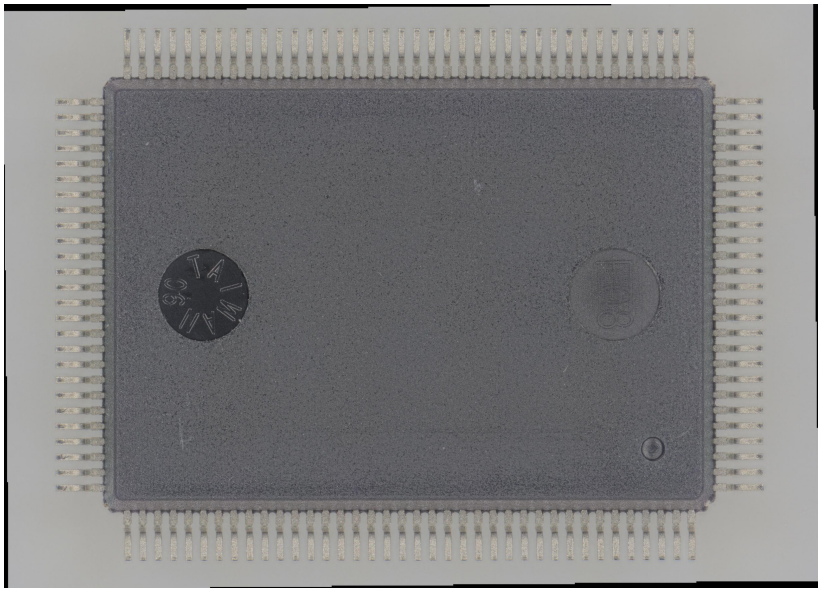
Arrival label Fig2

1.2 Surface Analysis

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

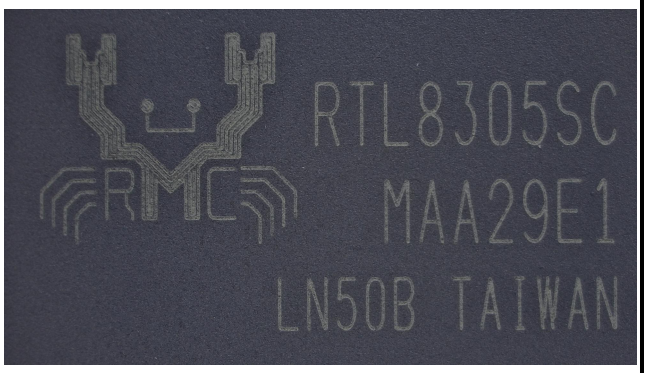
  Marking , typing version, typesetting and other comparison is consistent, chip packaging is not abnormal.

Top view Fig3

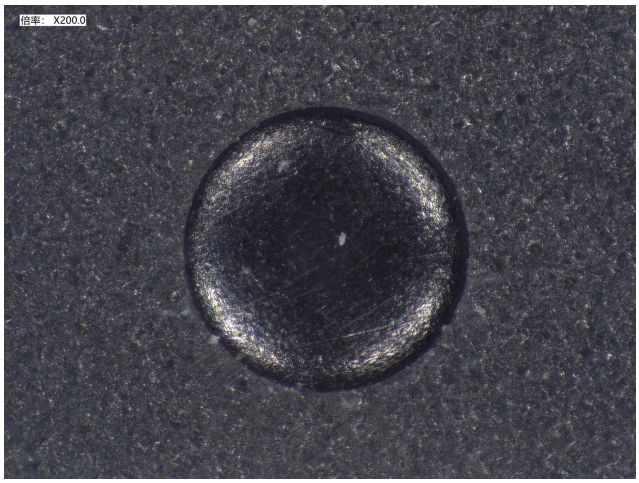


Bottom view Fig4

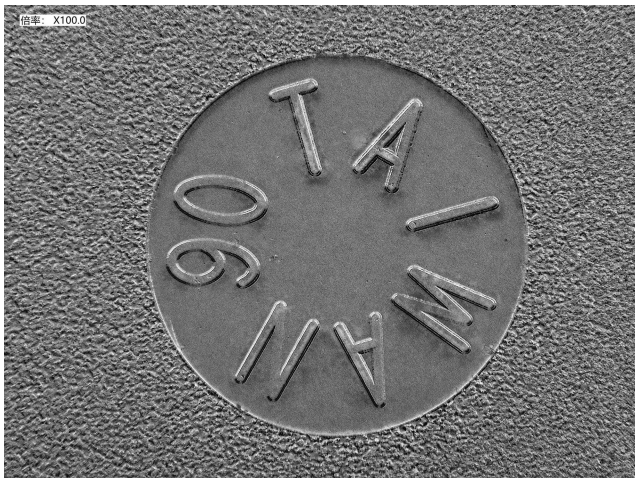
The marking on the surface of the sample is clear, the granularity is obvious, the shape of the marking is regular, and there is no trace of secondary polishing;



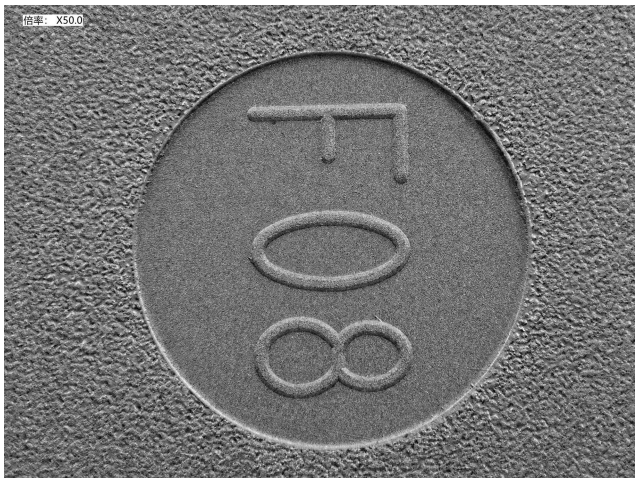
Sample Marking Fig5



Locating holes Fig6



Opt-SEM Fig7



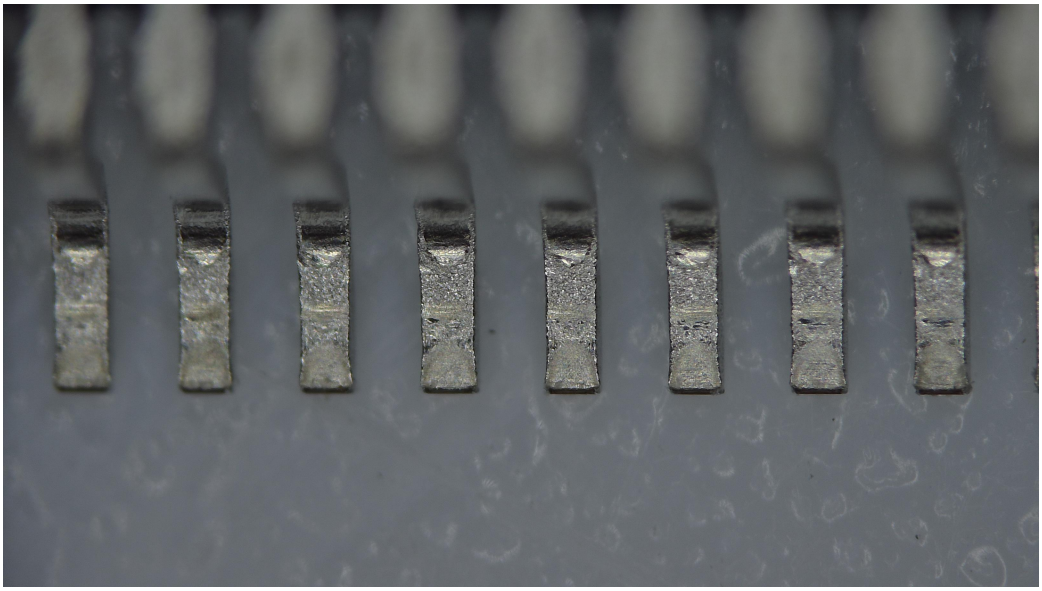
Opt-SEM Fig8

1.3 Pin Plating Analysis

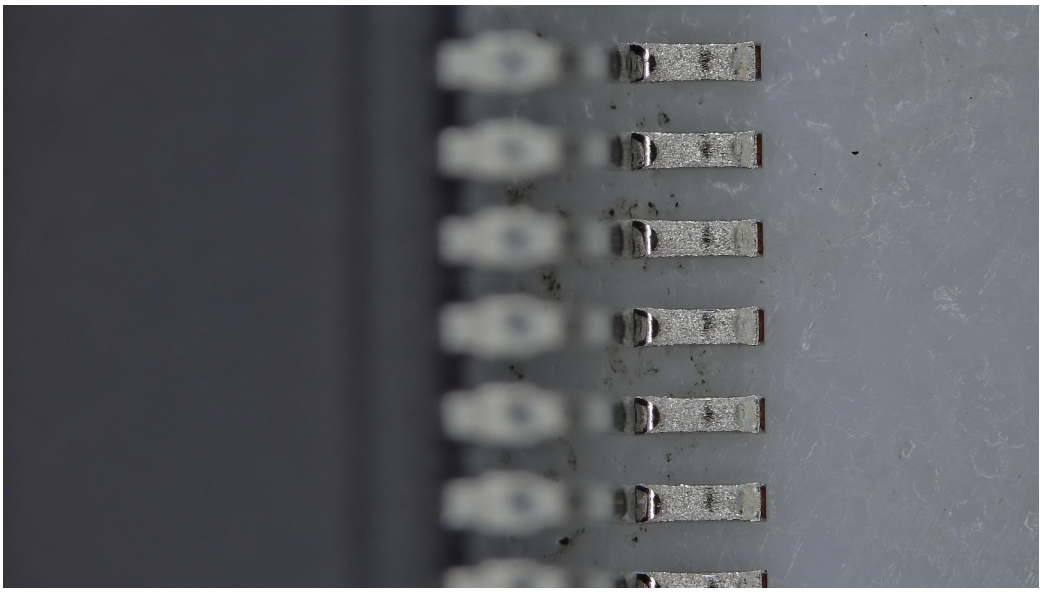
• Analysis of the sampled samples for inspection of the pin coating showed the following results:

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.

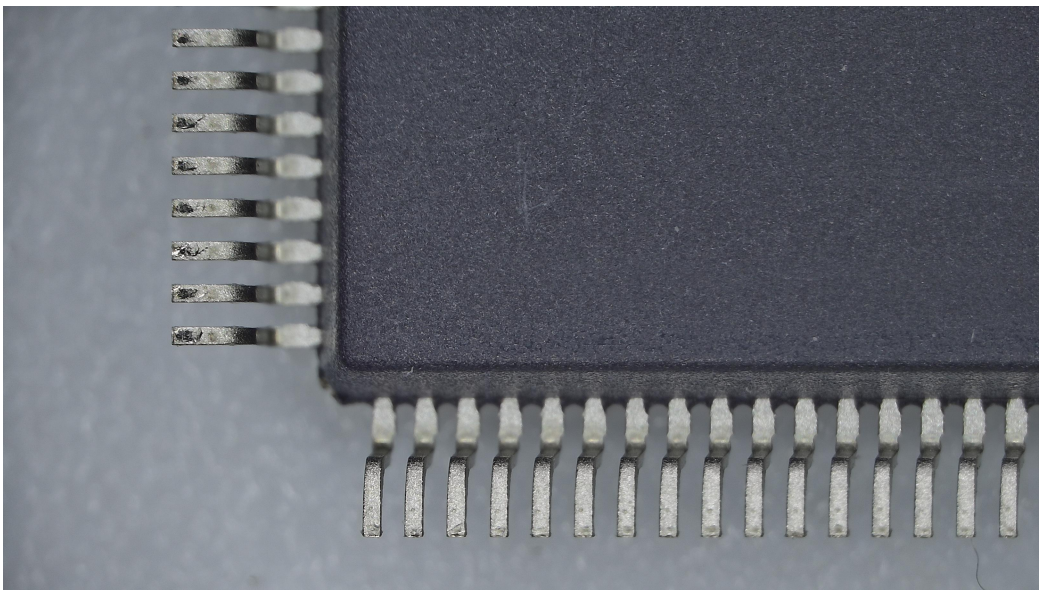
Top view Fig9



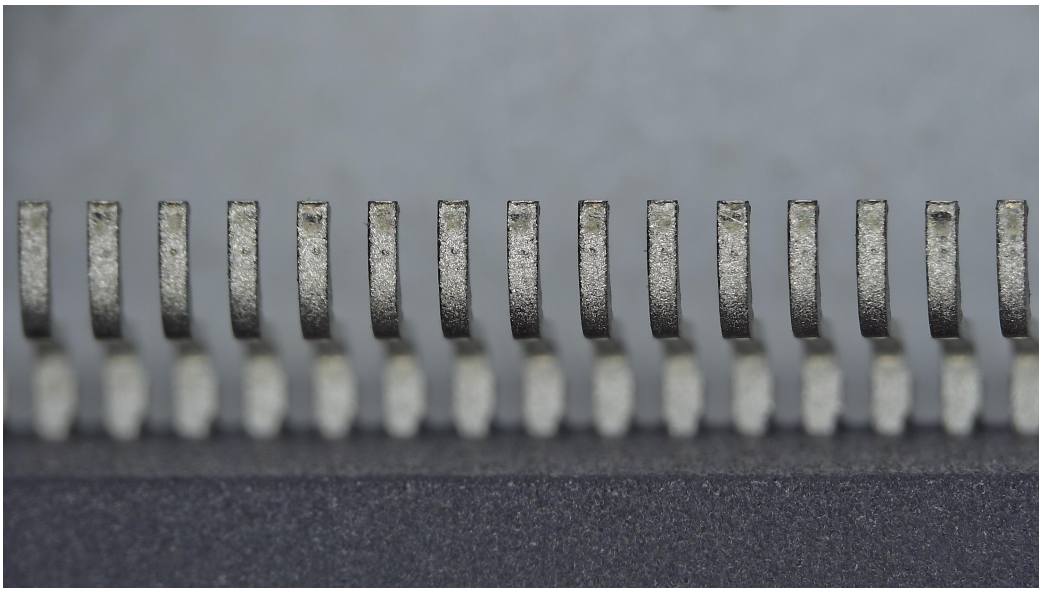
Top view Fig10



Top view Fig11

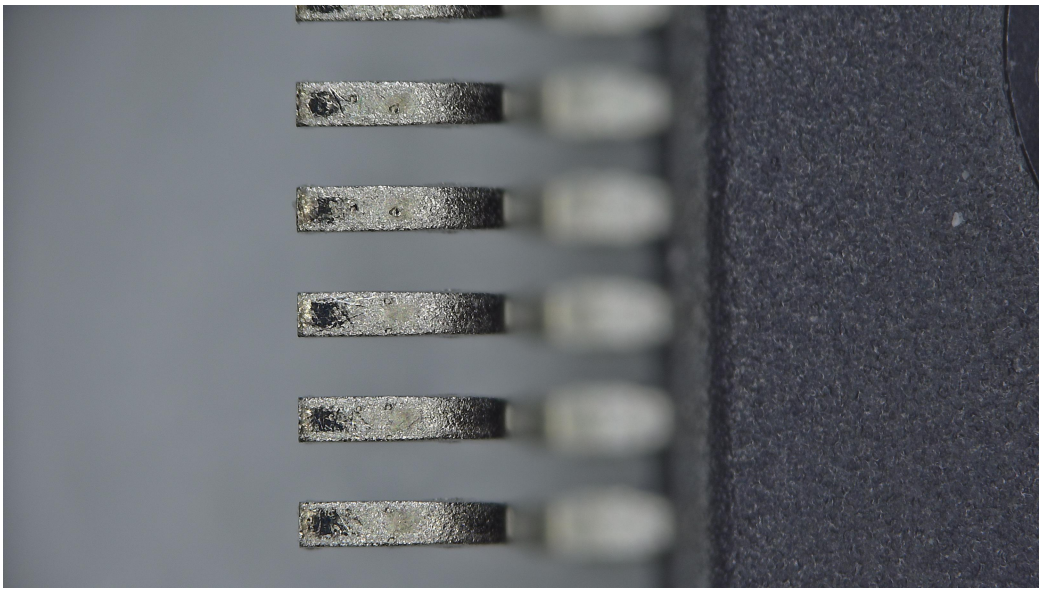


Bottom view Fig12



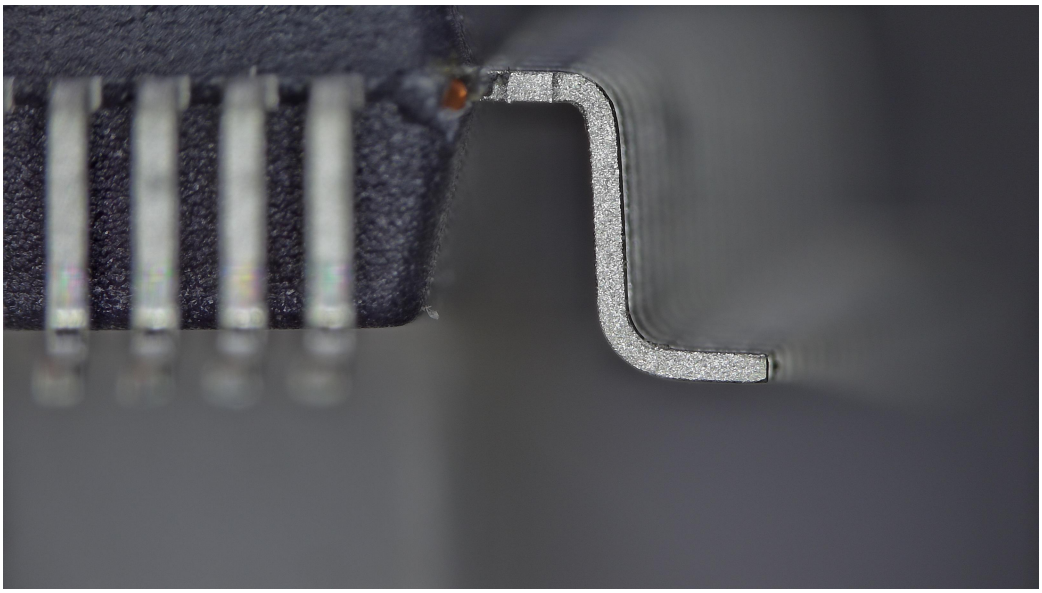
Bottom view

Fig13

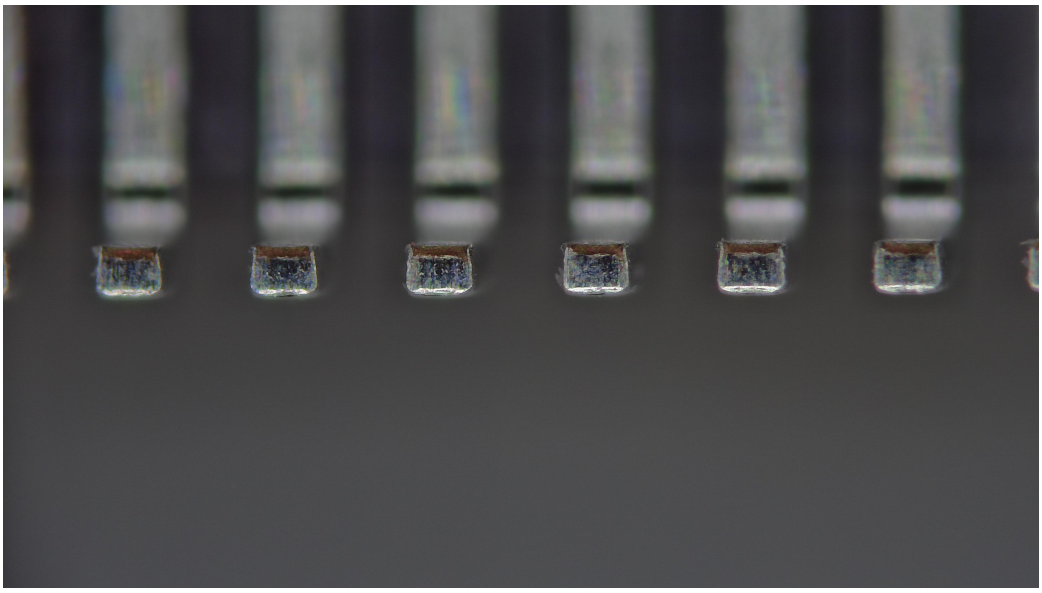


Bottom view

Fig14



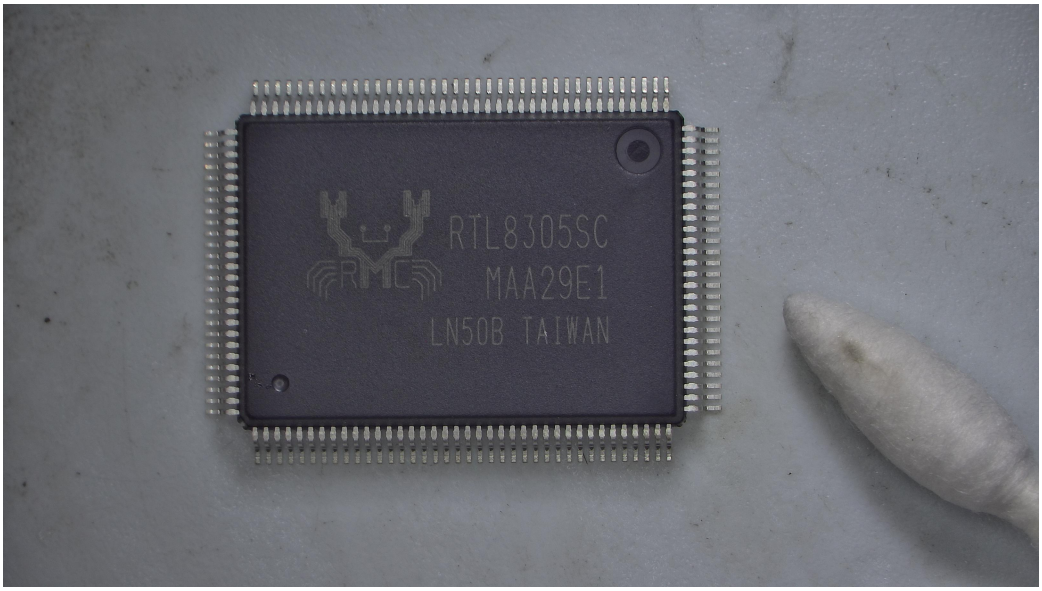
Side view Fig15



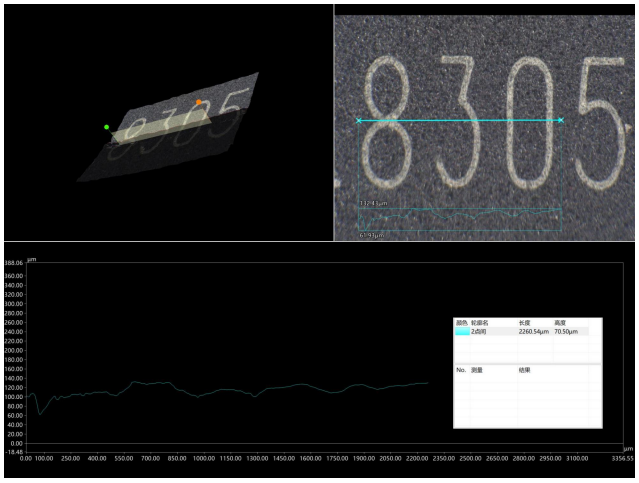
Pin Cross-section Fig16

1.4 Aceton Inspection

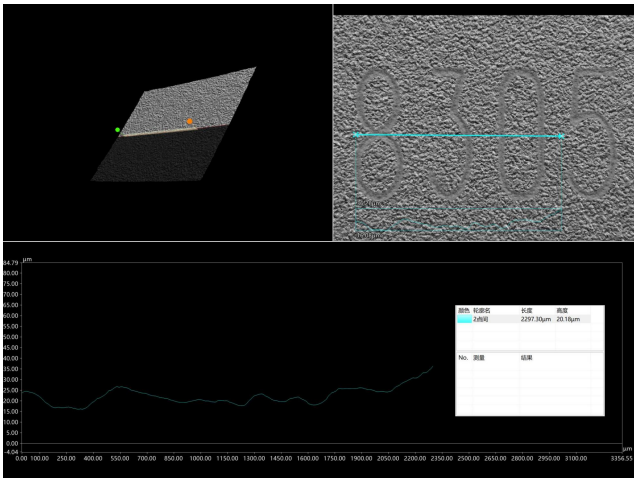
After the surface and side of the sample were wiped back and forth with acetone for 3 times, the mark was still clearly visible, there was no obvious secondary coating, the depth of the mark did not change significantly under the EMS(Electron Microscope Scan),and the cotton swab was not blackened and other abnormal phenomena.



Acetone Test Fig17



#1 Electron Microscope Scan Fig18



#2 Electron Microscope Scan Fig19

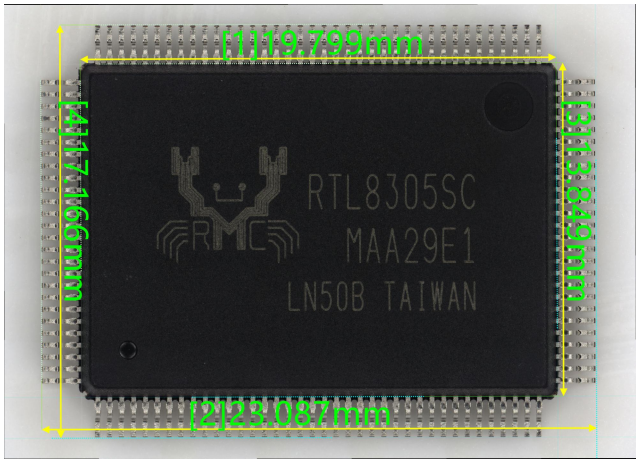
1.5 Dimension Measurement

- All size of the samples meet the requirement of the specifications.

Length：19.84mm Fig20

Width：13.85mm Fig21

Thicknesses：2.74mm Fig22

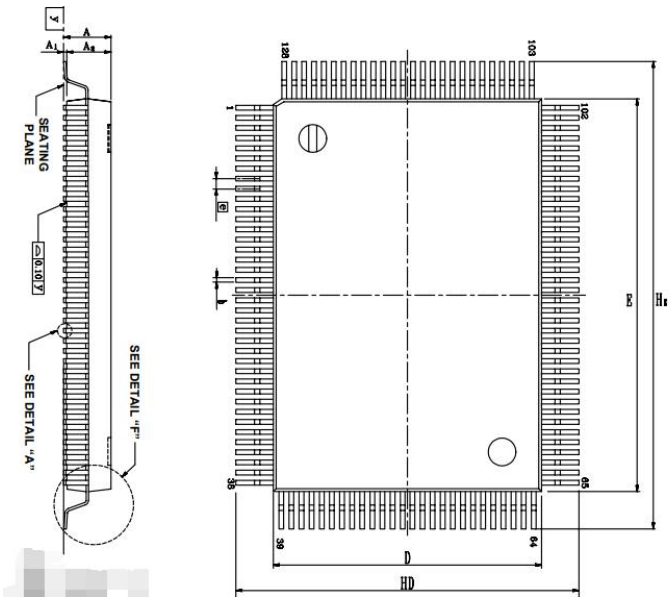


Electronic Measurement Fig23

Measurement data:

Sample number	Length/mm	Width/mm	Thicknesses/mm	Result
#1	19.80	13.85	2.74	PASS
#2	19.84	13.85	2.74	PASS
#3	19.92	13.85	2.74	PASS
#4	19.86	13.85	2.75	PASS
#5	19.87	13.86	2.74	PASS

Data Sheet Reference Dimensions

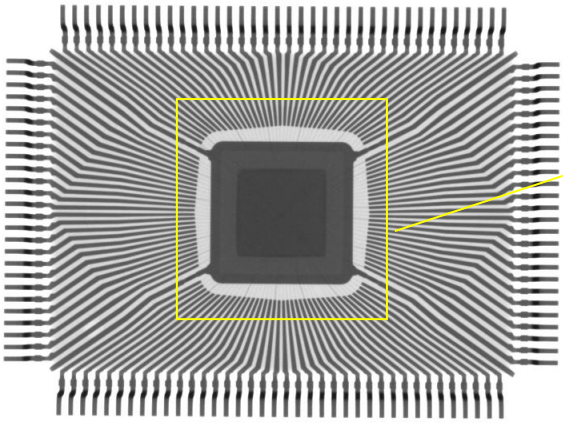


Symbol	Dimensions in inches			Dimensions in mm		
	Min	Typical	Max	Min	Typical	Max
A	-	-	0.134	-	-	3.40
A1	0.004	0.010	0.036	0.10	0.25	0.91
A2	0.102	0.112	0.122	2.60	2.85	3.10
b	0.005	0.009	0.013	0.12	0.22	0.32
c	0.002	0.006	0.010	0.05	0.15	0.25
D	0.541	0.551	0.561	13.75	14.00	14.25
E	0.778	0.787	0.797	19.75	20.00	20.25
e	0.010	0.020	0.030	0.25	0.5	0.75
HD	0.665	0.677	0.689	16.90	17.20	17.50
HE	0.902	0.913	0.925	22.90	23.20	23.50
L	0.027	0.035	0.043	0.68	0.88	1.08
L1	0.053	0.063	0.073	1.35	1.60	1.85
y	-	-	0.004	-	-	0.10
θ	0°	-	12°	0°	-	12°

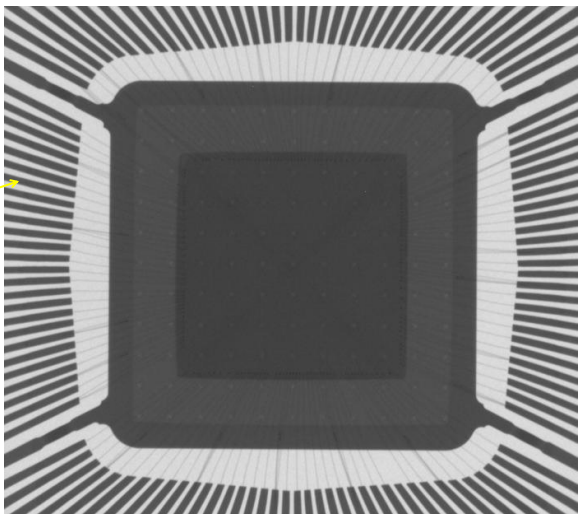
Fig24

2.X-Ray Inspection

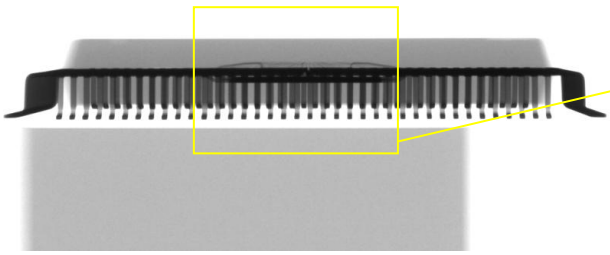
- X-RAY: Test does not reveal any abnormal inside the chips



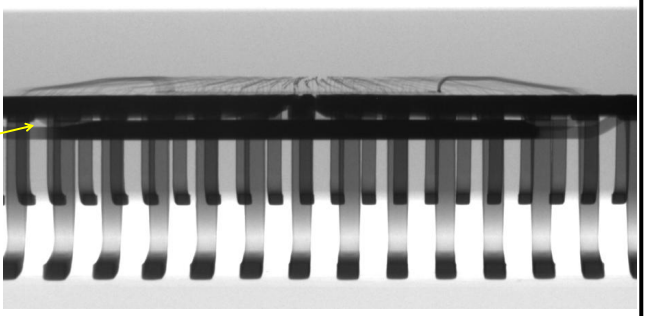
Top View Fig25



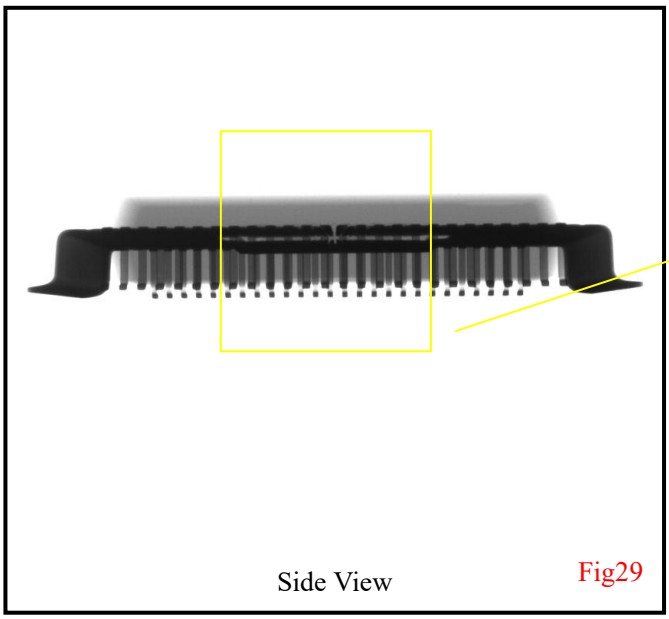
Top View Fig26



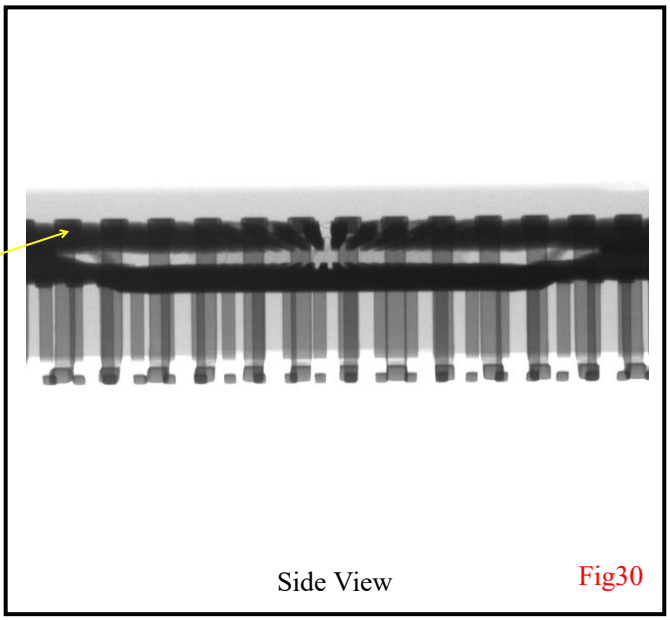
Side View Fig27



Side View Fig28



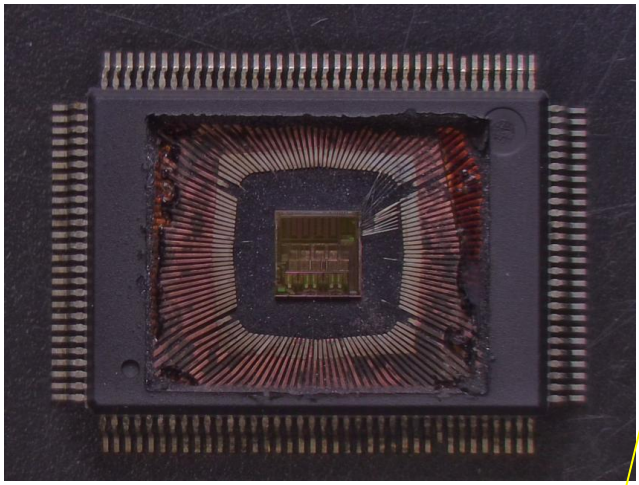
Side View Fig29



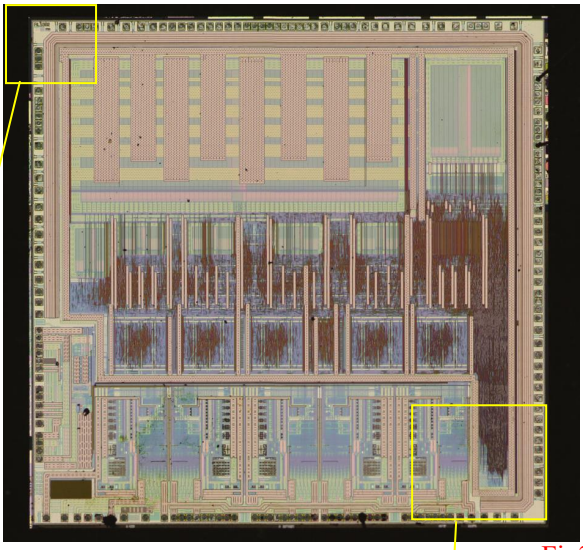
Side View Fig30

3.De-cap Die Analysis

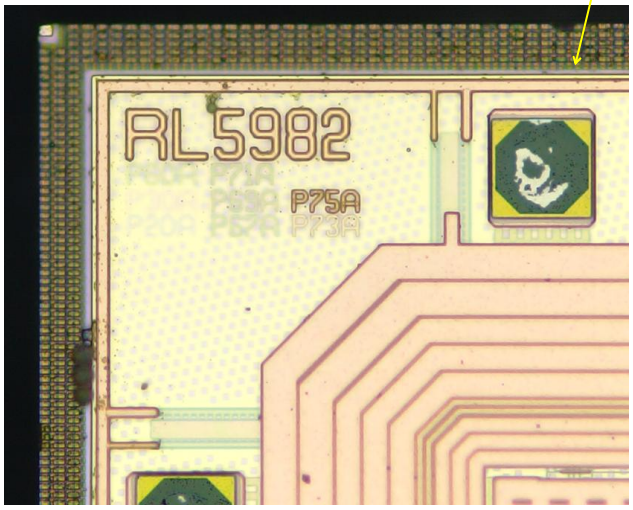
• De-cap die analysis according to the standard , After opening the die, it was found that the internal structure was complete , The inside of the wafer displays information such as "RL5982" and "P75A" , It is judged to be made by the original factory.



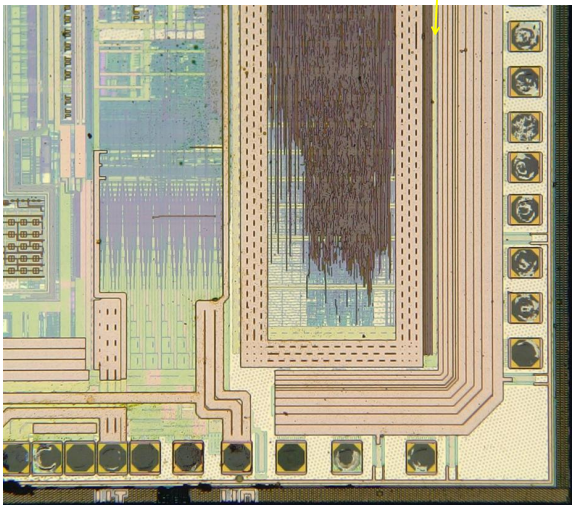
Die topography Fig31



Die architecture Fig32



Wafer Fig33



Wafer Fig34

4.List of Test Equipments

NO.	Inspection Item	Type of Equipment	Proofreading Period
1	Video microscope	SWG-N714	2024.07.28~2025.07.27
2	X-Ray	ZM-X5600	2024.12.04~2025.12.03
3	Digital Caliper	Mitutoyo 0-150mm	2025.01.08~2026.01.07
4	3D microscope	VHX-7000	2024.11.03~2025.11.02
5	Tin furnace	QUICK100-15S	2024.08.20~2025.08.19
6	Chemical unpacker	RKD motor-Lithium etching7000	2024.06.21~2025.06.20
Operation Environment		Temperature:15℃~35℃,humidity:30%～60%RH	