

QC Report Sample:

Work Order No : QC01190/ **Sales Order No :**FCPI202503250028

Product Manufacturer :ST/ **Manufacturer Part No :**ISM330DLCTR

IT:P Internal Lot No : WH/IN/00233-95389

Component Lot No :/

Component Lot Quantity : 5004

Date Code : 2233+ 2221+

Country of Origin :Philippines

External Visual Inspection on 96 PCS sample marked with D/C 2221+ and 4 PCS sample marked with D/C 2233+ . No secondary coating, sanding marks, crack or chips were observed on all inspected.

Samples pass chemical MPT for remarking, indicating that the samples are not remarked.

10PCS sample X-ray analysis reveals consistent internal structure within the tested samples. The samples do not exhibit internal connection defects, voids or other apparent anomalies.

Inspection Report:

#	Packaging Inspection	Sample Size	Result
1	Verify product condition – any damage on product or packaging	5004	Pass
2	Verify package structural integrity	/	Pass
3	Verify labels – any signs of tampering	5000	Pass
4	Verify packaging ESD compliance	5000	Pass
5	Verify if humidity control package (dry pack) is in good condition	5000	Pass

6	Verify condition of humidity sensitivity card	5000	Pass
7	Verify consistency of inner and outer packaging label	5000	Pass
8	Verify tape leader and trailer for factory sealed tape and reel products	5004	Pass
9	Verify PIN#1 orientation with respect to specific packaging type	5004	Pass

#	Component Surface Inspection	Sample Size	Result
1	Inspect parts surfaces have not been mechanically, resurfaced, or re-stamped	100	Pass
2	Inspect for blacktopping, overspray, surface sanding or uneven thickness	100	Pass
3	Inspect for minor cracks on the surface of the parts	100	Pass
4	Check for ink marks, colored dots and sticker on components indicating previous programming	100	Pass
5	PIN#1 indicator is consistent within the lot	100	Pass
6	Inspect for any type of residue–dirt,debris,flux,foreign objects, glue, or stickers	100	Pass
7	Inspect for evidence of tool/pull marks or heat-sink witness marking	100	Pass

#	Marking Inspection	Sample Size	Result
1	All markings are clear	100	Pass
2	Verify if markings on top and bottom of parts are consistent throughout the entire lot–font color and size orientation	100	Pass
3	Verify if marking of part number,datecode,country of origin or lot number are consistent	100	Pass
4	Check for evidence of test dots or engineering sample	100	Pass

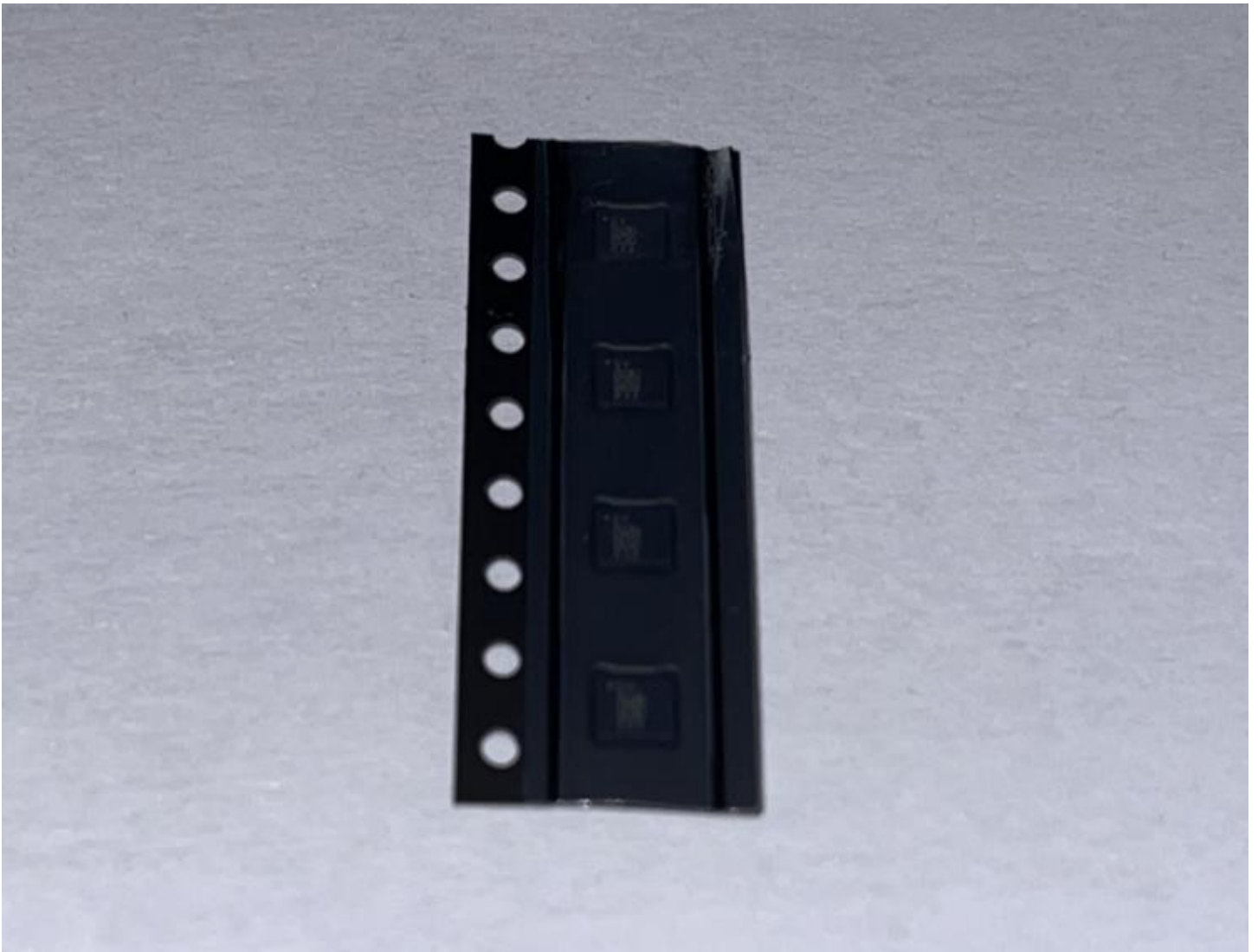
#	Lead Inspection	Sample Size	Result
1	Verify any bent, damaged, or missing lead	100	Pass
2	Check lead alignment	100	Pass
3	Verify leads for scratches on outer in inner lead surfaces.	100	Pass
4	Inspect consistency of lead with respect to color, gloss/dull and texture	100	Pass
5	Inspect if leads exhibit any corrosion, discoloration, or oxidation	100	Pass
6	Inspect if leads have been used or trimmed	100	Pass

#	Acetone Test	Test Result
1	Rub part surface with cotton bud dipped in acetone solvent. Check for transfer of Black coating on cotton bud.	3 - PASS

#	Measurements and Pin Count	Test Result	
1	Counting number of pins per part - Verify if number of pins on component matches manufacturer's specifications	LGA14	
Sample	Length	Width	Height
1	2.49mm	3.00mm	0.83mm
2	2.49mm	3.00mm	0.83mm
3	2.49mm	3.00mm	0.83mm



Appendixes



The Packaging

DC:2233+

Manufactured under patents or patents pending

Assembled in: PHILIPPINES

Pb-free 2nd Level Interconnect

MSL: 3 Bag seal date: 03 SEP 2022

PBT: 260 C Category: e4 ECOPACK2/ROHS

TYPE: ISM330DLCTR
ISM330DLCTR-7C/

Total Qty: ~~5000~~

Trace Code 78233ASM V1 78

Marking SY

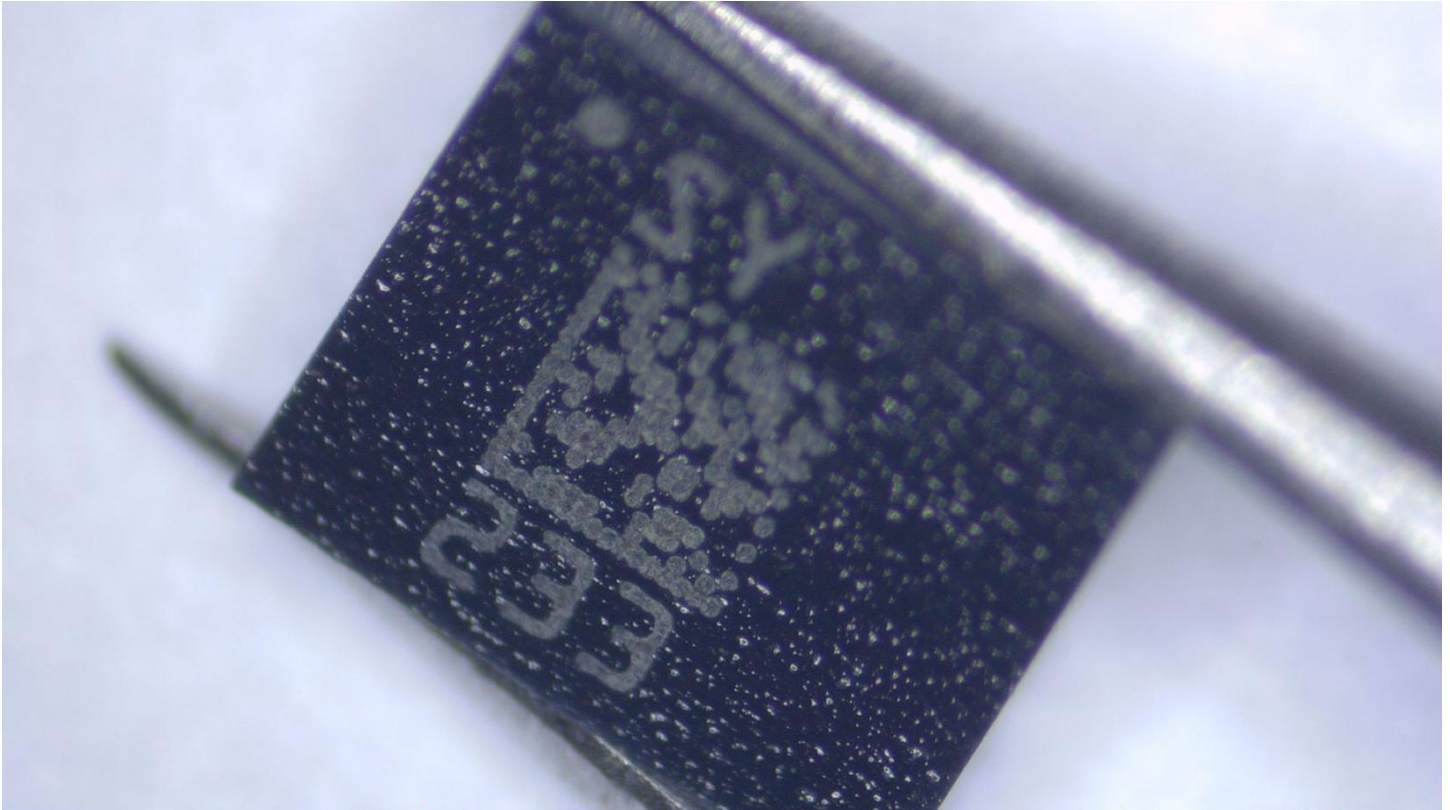
Bulk ID T2N35LXH0006



Please provide the bulk ID for any inquiry

The Label

DC:2233+



Top Marking

DC:2233+



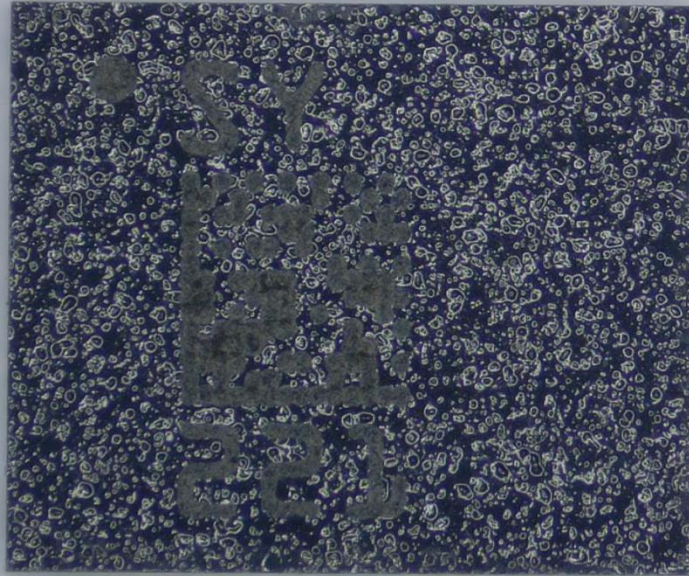
The Packaging

DC:2221+

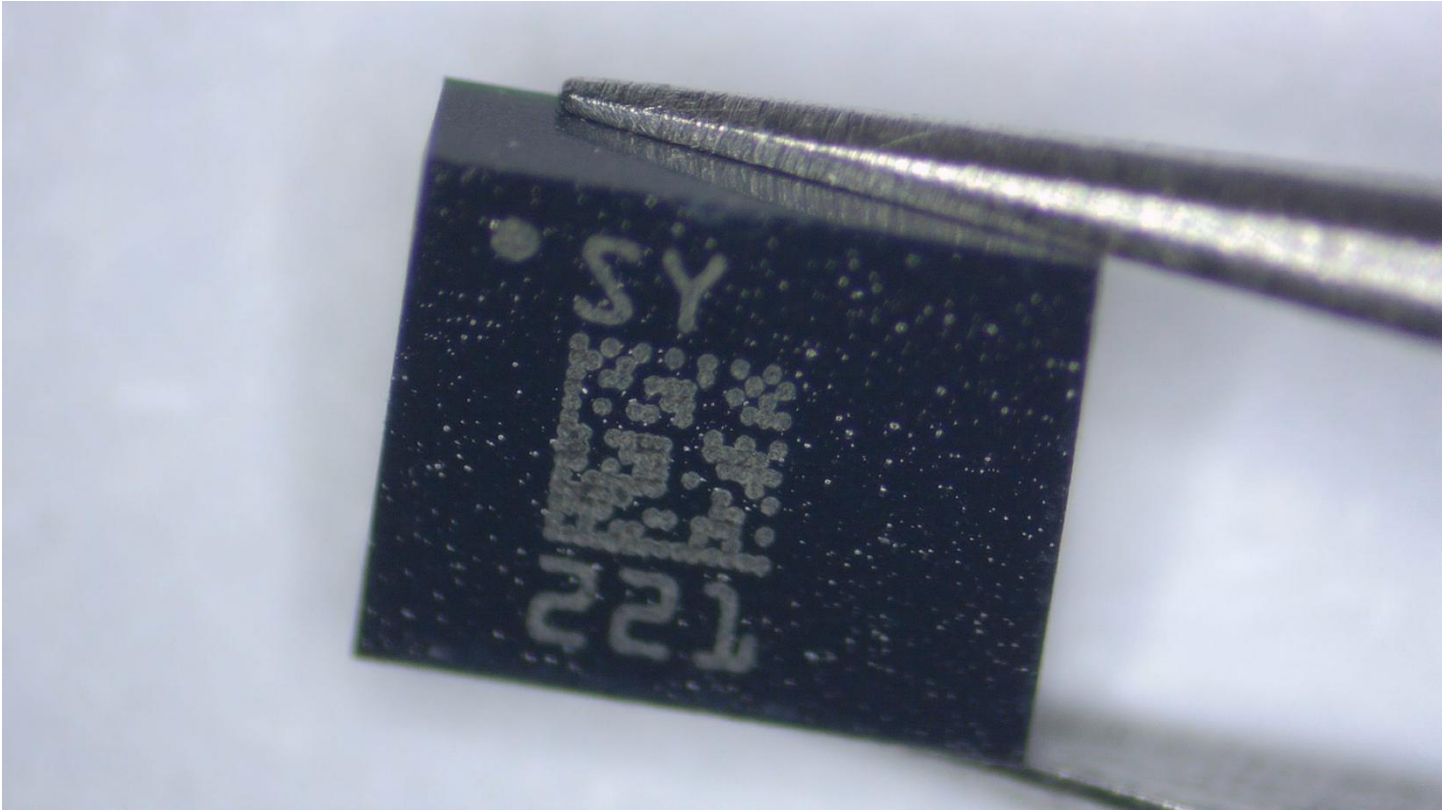


The Label

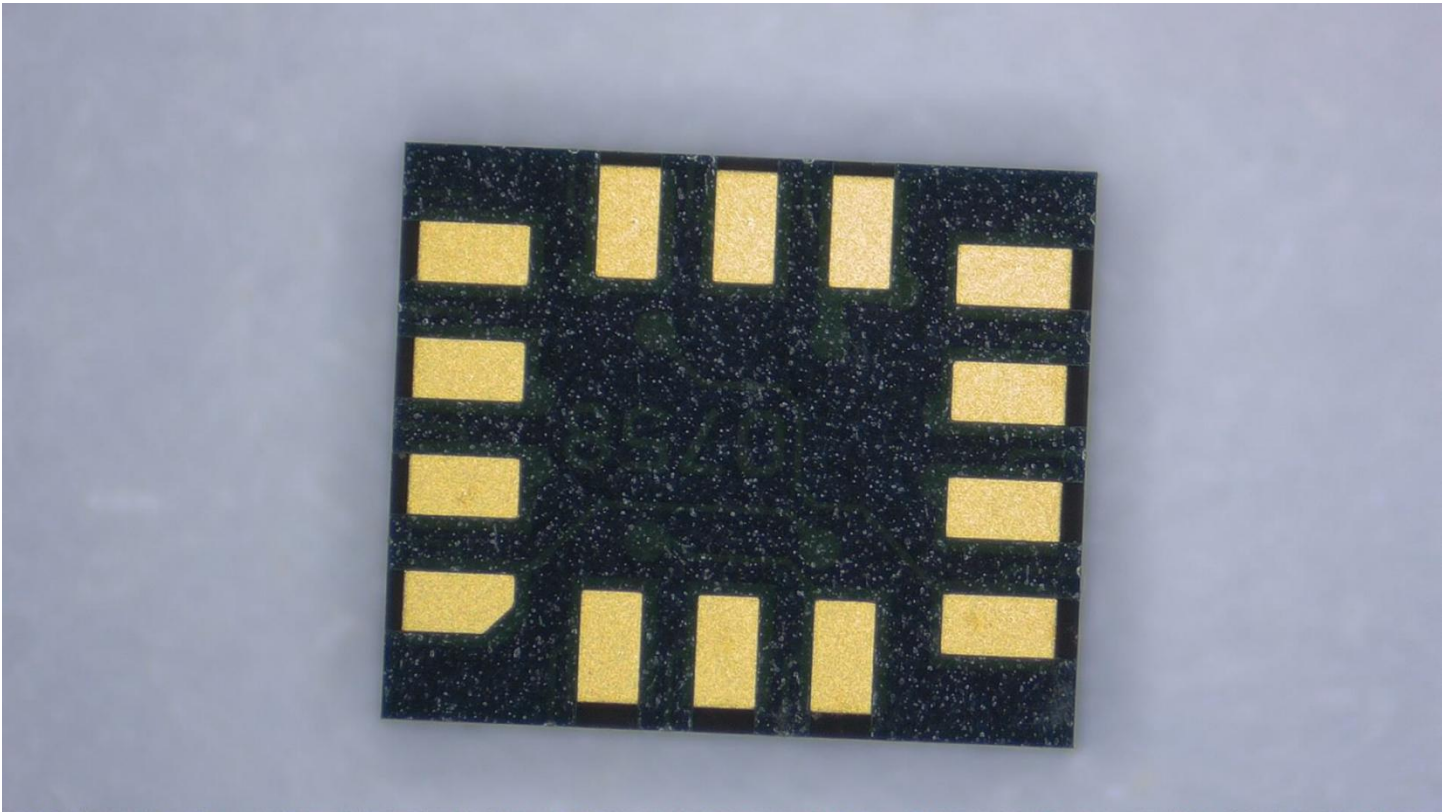
DC:2221+



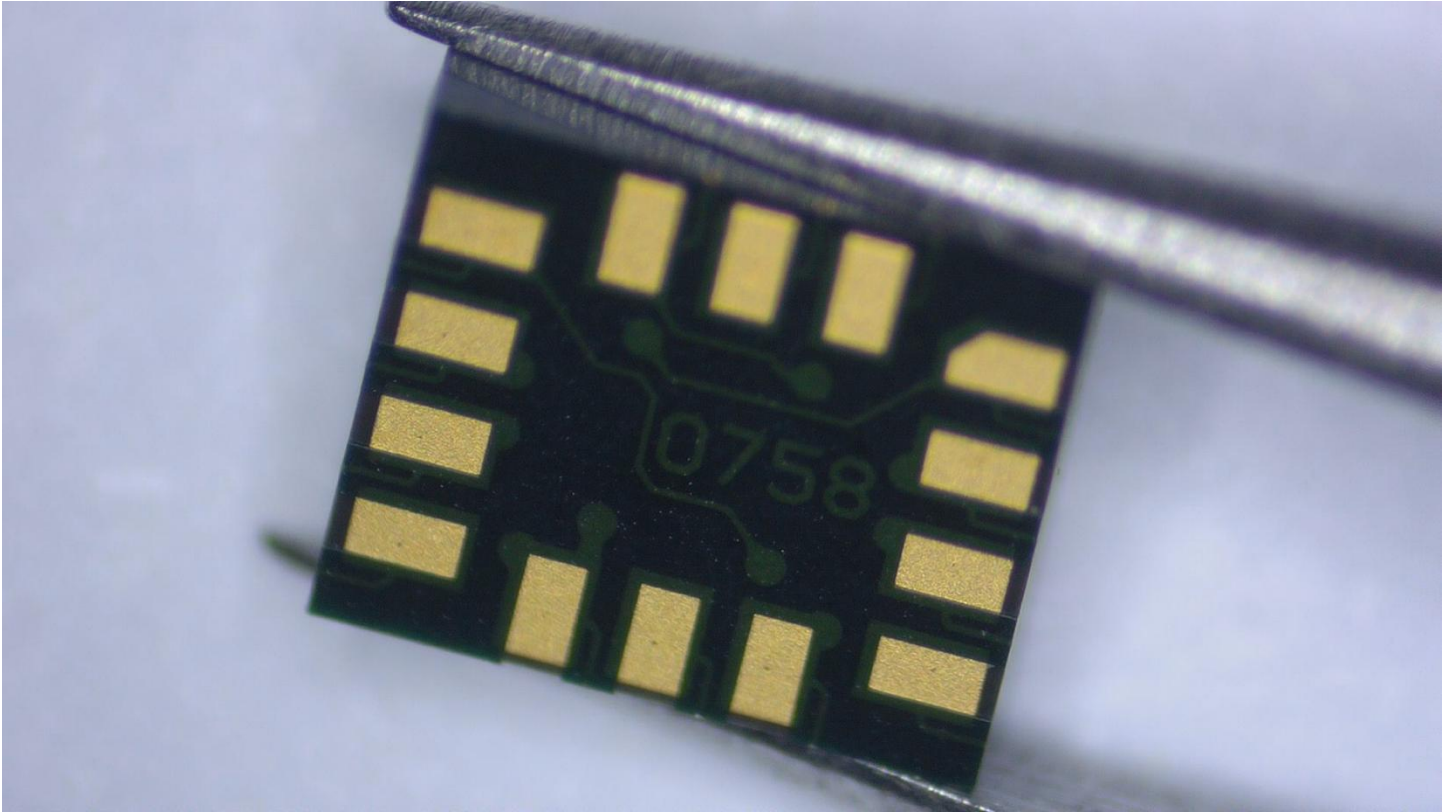
Top View



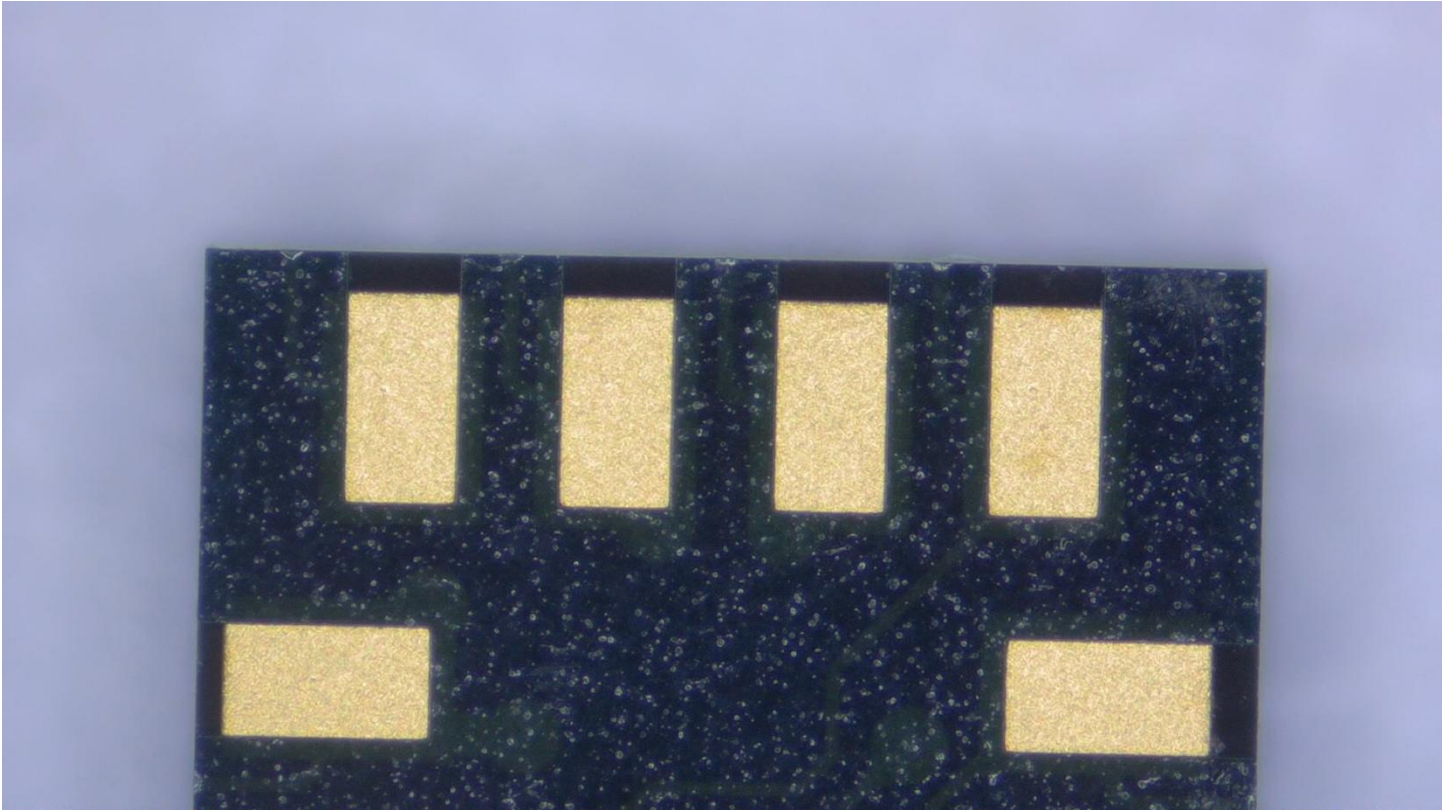
Top Marking



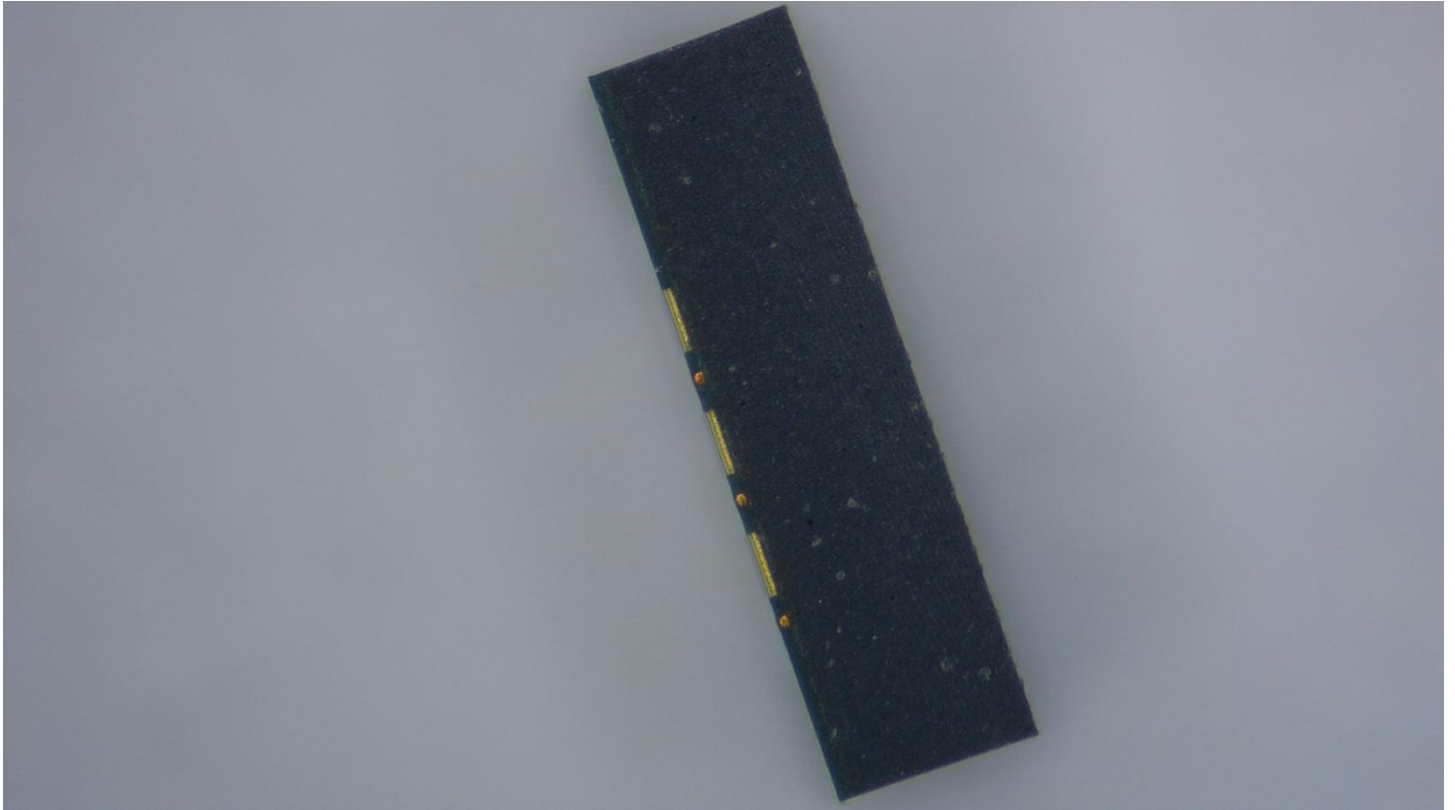
Bottom View



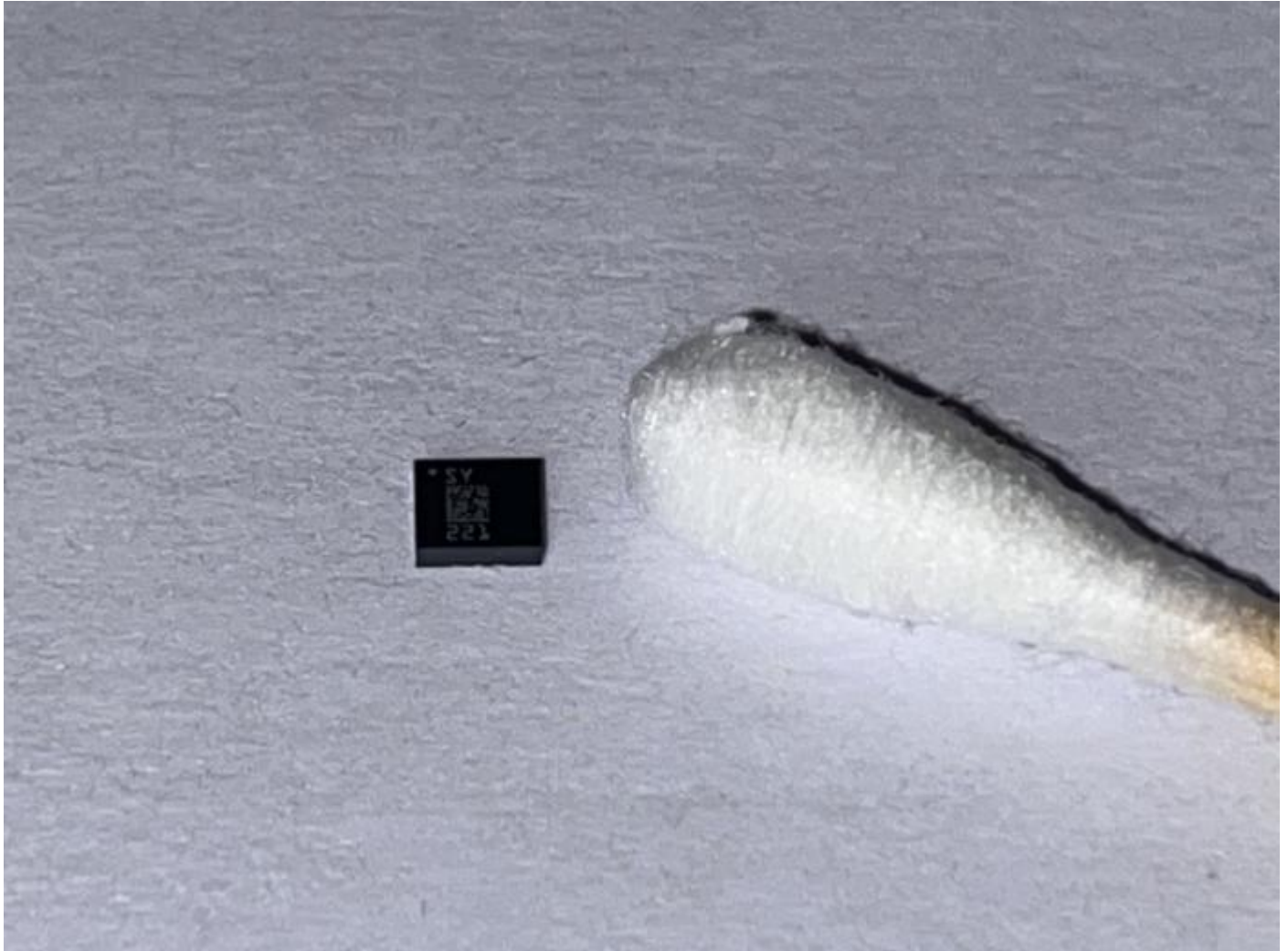
The Leads 1



The Leads 2



Side of View



Acetone Test

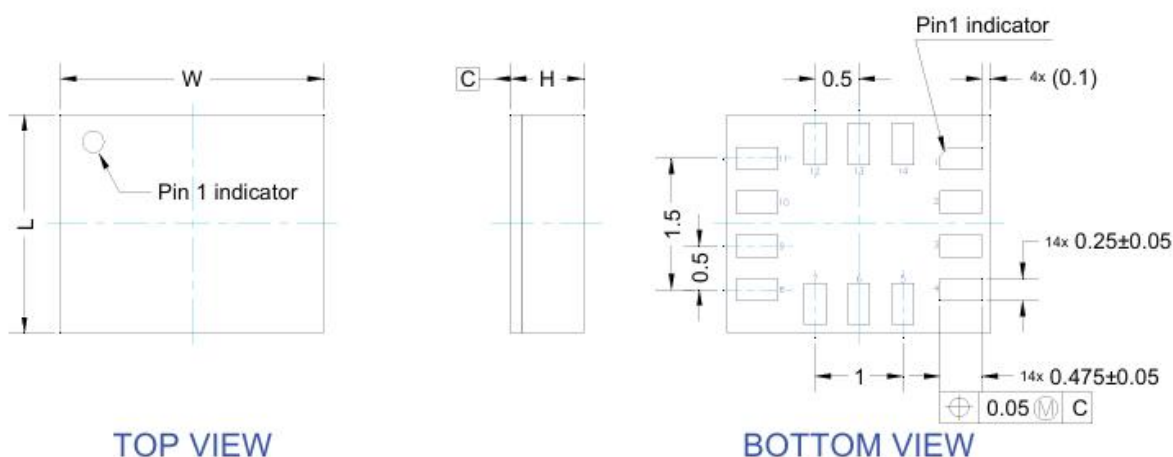


14 Package information

In order to meet environmental requirements, ST offers these devices in different grades of **ECOPACK** packages, depending on their level of environmental compliance. ECOPACK specifications, grade definitions and product status are available at: www.st.com. ECOPACK is an ST trademark.

14.1 LGA-14L package information

Figure 23. LGA-14L 2.5 x 3.0 x 0.86 mm package outline and mechanical data



Dimensions are in millimeter unless otherwise specified
General tolerance is ± 0.1 mm unless otherwise specified

OUTER DIMENSIONS

ITEM	DIMENSION [mm]	TOLERANCE [mm]
Length [L]	2.50	± 0.1
Width [W]	3.00	± 0.1
Height [H]	0.86	MAX



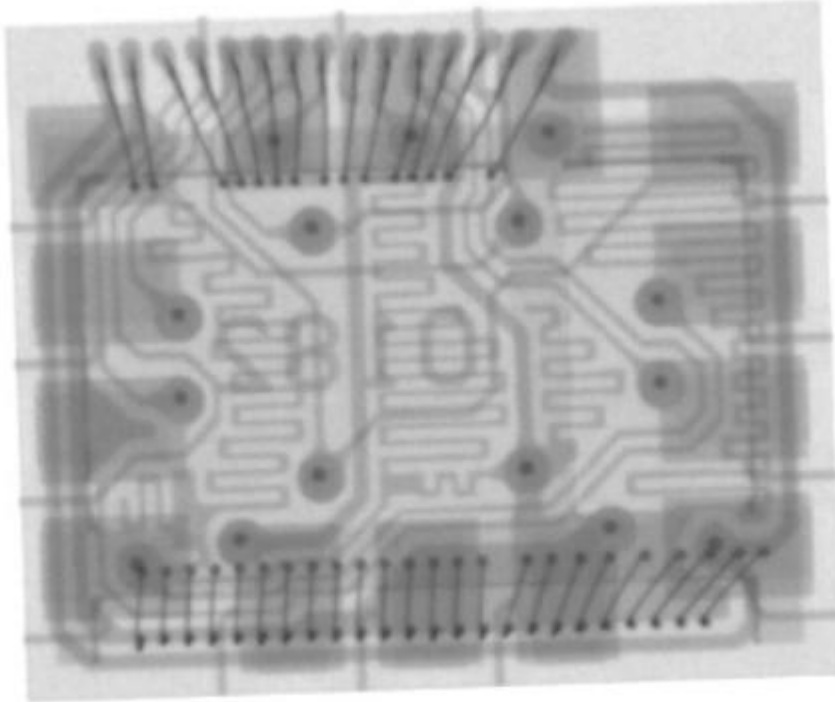
Length



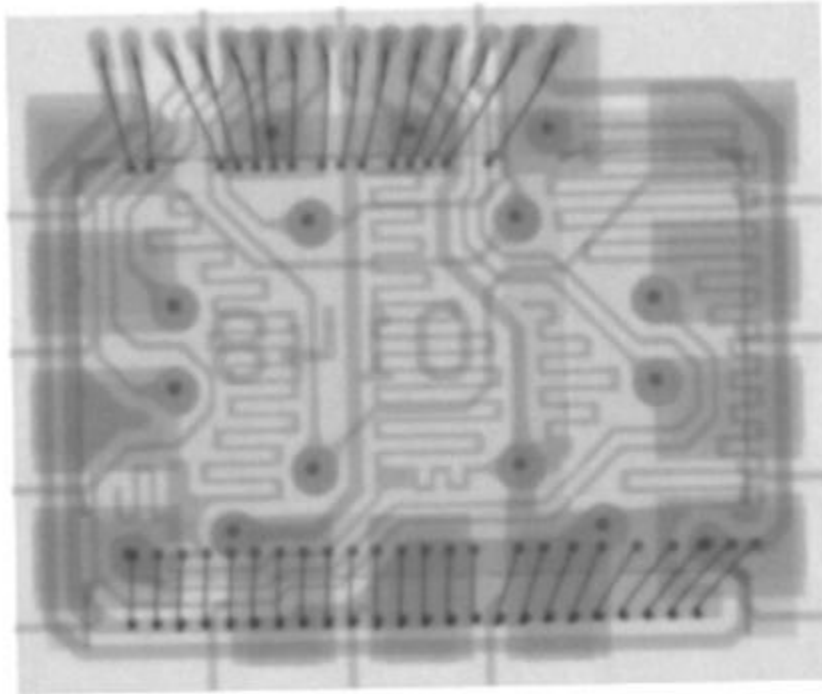
Width



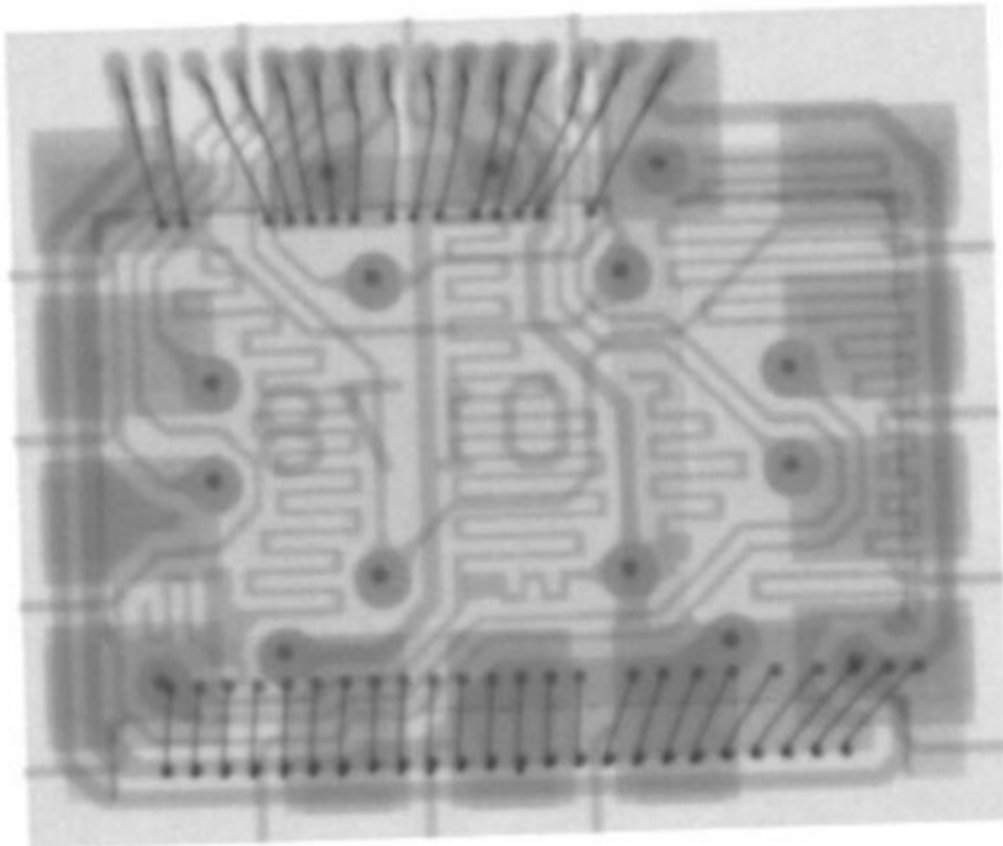
Height



X-RayTopView-Sample1



X-RayTopView-Sample2



X-RayTopView-Sample3

Test Report

Sample Name: _____ The integrated circuit

Part Number: _____ ISM330DLCTR

Manufacturer: _____ ST

Customer: _____ JANtronic GmbH

Shenzhen Chuangxin Online Testing Service Co., Ltd.

April 02, 2025



Test Report

Customer: JANtronic GmbH

Customer Address: N/A

Sample Name: The integrated circuit

Part Number: ISM330DLCTR

Manufacturer: ST

Date Code: 2221/2233

Package Type: LGA-14

Quantity Received: 4 PCS

Quantity Inspected: 2 PCS

Date Received: 03/28/2025

Date Tested: 03/31/2025/13:00 - 03/31/2025/19:00



Tested by Allen

Inspected by Nacy

Approved by Leo

Test Items

☐ External visual inspection

☐ Pin correlation test

☐ Programming test

☒ Solderability analysis

☐ Radiography(X-ray)

☐ XRF test

☐ Key functional test(KFT)

☐ Baking

☐ Tape and reel

☐ Top permanency test

☒ Internal visual inspection

☐ SAT test

☐ Cross section

Methods & Equipment

1.1 Test standard:

- **AS6081A-2023**
- **J-STD-002E-2017**

1.2 Optical microscope:

- Equipment spec:

Optical microscope: SEZ-260 X7-X45(Due date: 07/17/2025)

Metalloscope: FJ-5A X50-X1000 (Due date: 07/17/2025)

1.3 Tin melting furnace:

- Equipment spec:

Tin melting furnace: BK-207(Due date: 07/17/2025)

Flux: No. 2 standard active rosin flux

1.4 Laser lid opener:

- Equipment spec:

Laser lid opener: DM300-IC(Due date: 07/17/2025)

1.5 Datasheet Reference:

- 《ST ISM330DLCTR》:

https://item.szlcsc.com/datasheet/ISM330DLCTR/3325271.html?spm=sc.gb.xds.a_sc.gb.hd.ss&c=Z&lcsc_vid=E1FaUQADRwRdBVFWRIUNVFJTQAJaBVZWRIYPU1YHE1kxVINSRFRbUlXVRVdbVTtW



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Analysis Summary

Solderability analysis:

Applicable standard: **J-STD-002E-2017**

Solderability tested were performed on 2 PCS samples(1 PCS of D/C2221 and 1 PCS of D/C2233) using the dip and look methods. 2 PCS pass solderability test. The dipped portion of the terminations is more than 95% covered by a continuous new solder coating.

Internal visual inspection:

Applicable standard: **AS6081A-2023**

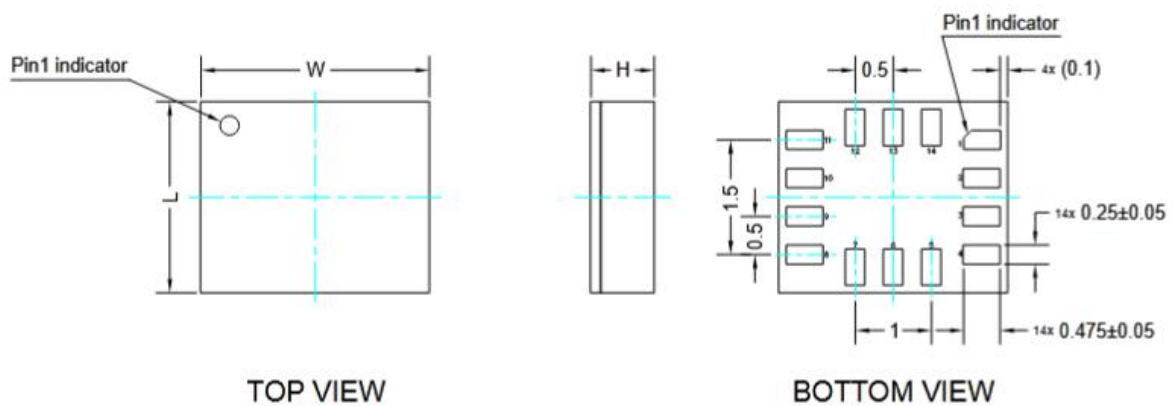
Internal visual inspection was verified on 2 PCS samples(1 PCS of D/C2221 and 1 PCS of D/C2233). The 2 PCS samples have the same structure and both have 2 PCS dies. Die1 manufacturer ST marking with 2015 copyright year and die marking VA95B were found on the die surface. Die2 size was 2.73mm*1.93mm, samples do not exhibit cracks or damage on die surface. Devices confirmed to be the ST device.

1. Device description:

iNEMO inertial module: 3D accelerometer and 3D gyroscope with digital output for industrial applications.

2. Package dimensions:

Figure 23. LGA-14L 2.5 x 3.0 x 0.86 mm package outline and mechanical data



Dimensions are in millimeter unless otherwise specified
General tolerance is ± 0.1 mm unless otherwise specified

OUTER DIMENSIONS

ITEM	DIMENSION [mm]	TOLERANCE [mm]
Length [L]	2.50	± 0.1
Width [W]	3.00	± 0.1
Height [H]	0.86	MAX

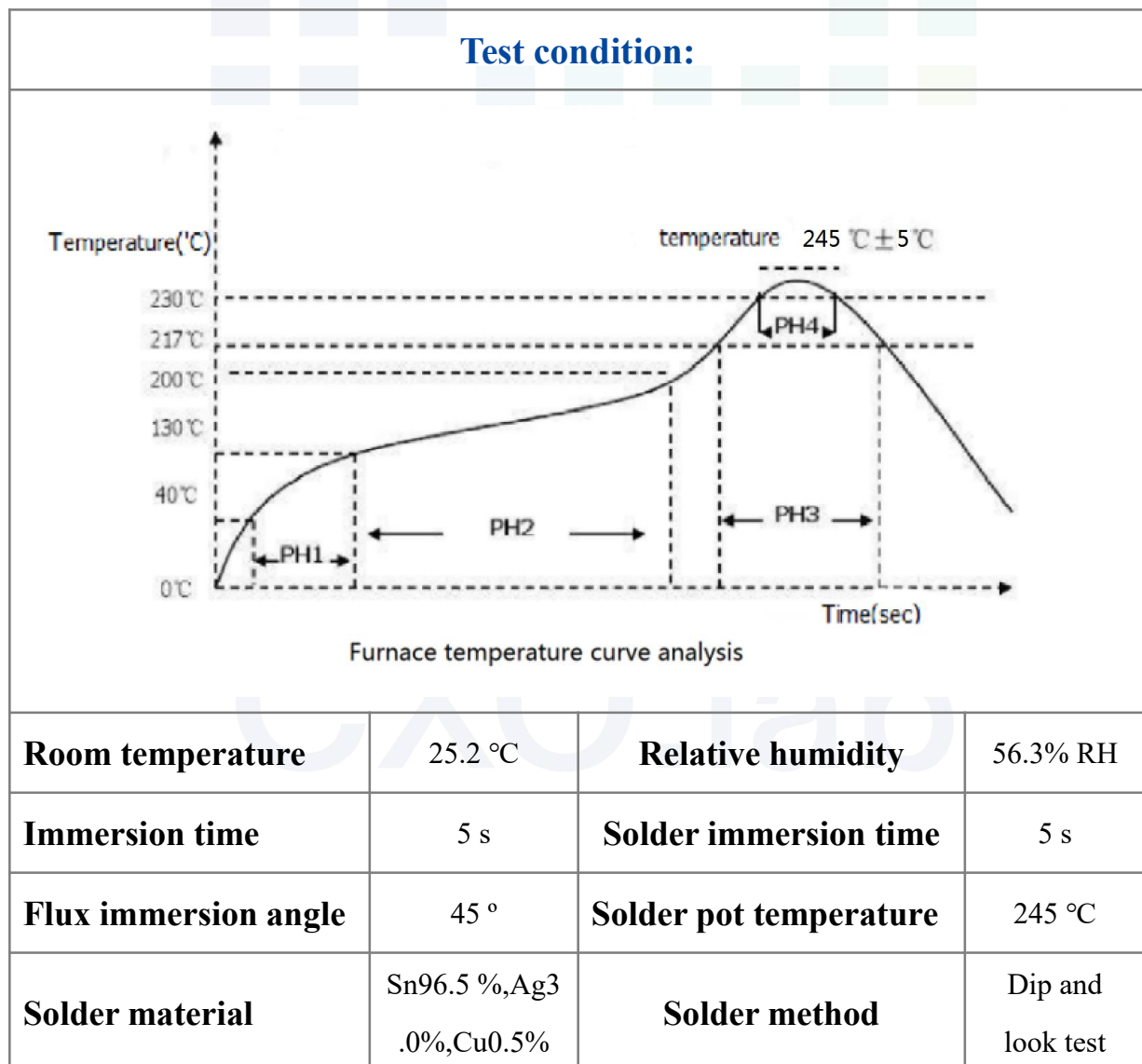
DM00249496_1

4. Solderability analysis:

Applicable standard: **J-STD-002E-2017**

Solderability tested were performed on 2 PCS samples(1 PCS of D/C2221 and 1 PCS of D/C2233) using the dip and look methods. 2 PCS pass solderability test.

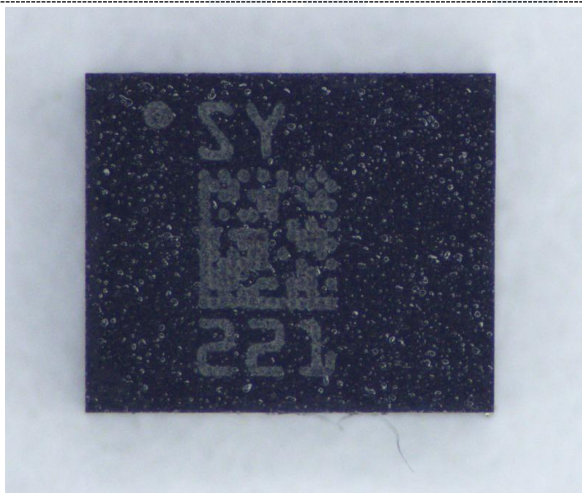
The dipped portion of the terminations is more than 95% covered by a continuous new solder coating.



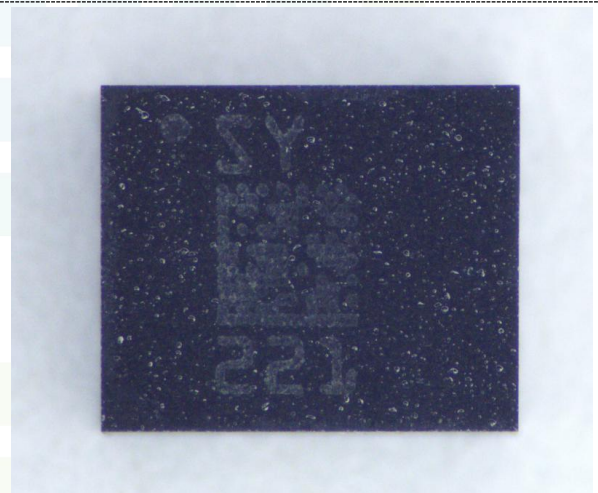
Tin furnace temperature



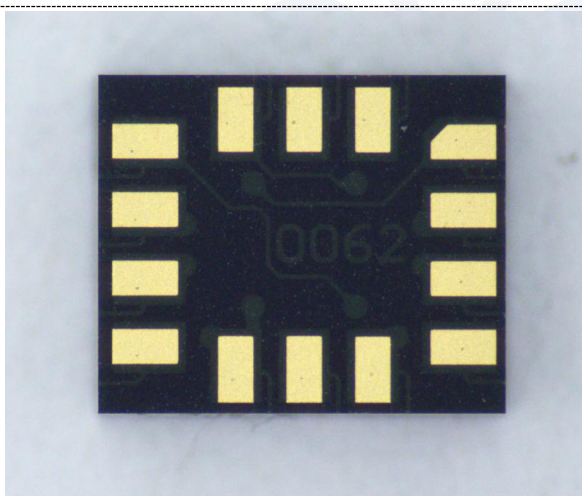
D/C2221-Before top view



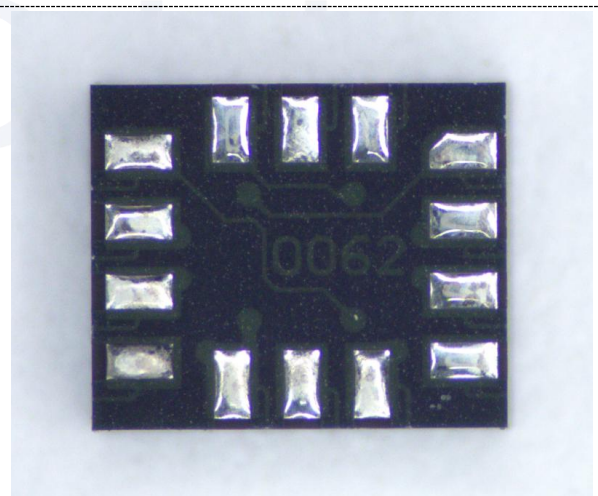
D/C2221-After top view

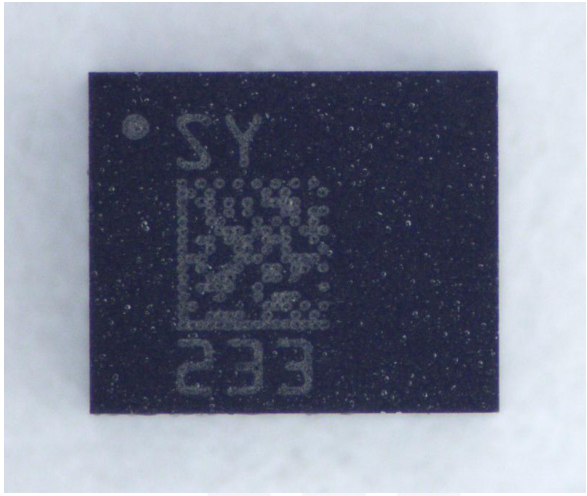
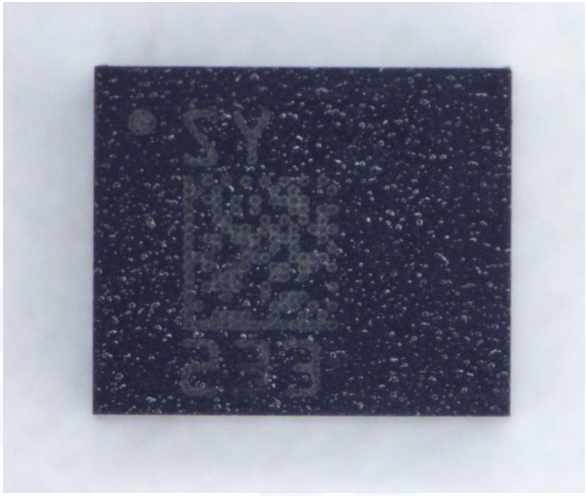
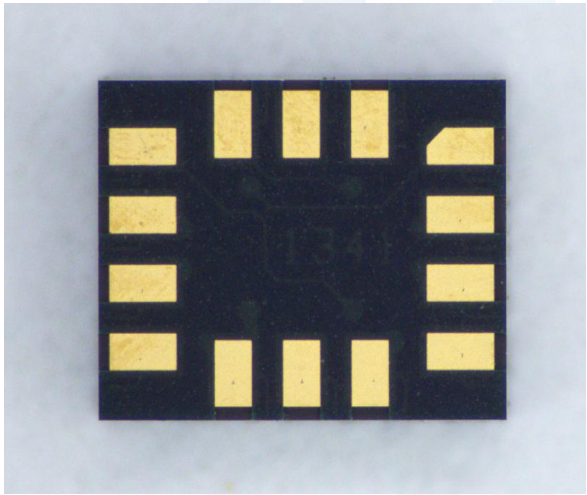
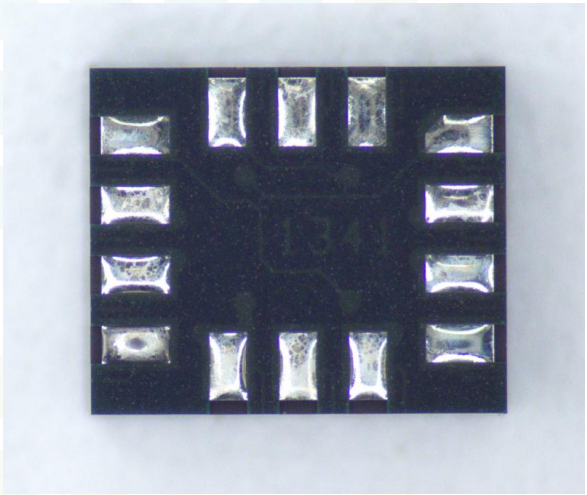


D/C2221-Before bottom view



D/C2221-After bottom view



D/C2233-Before top view	D/C2233-After top view
	
D/C2233-Before bottom view	D/C2233-After bottom view
	

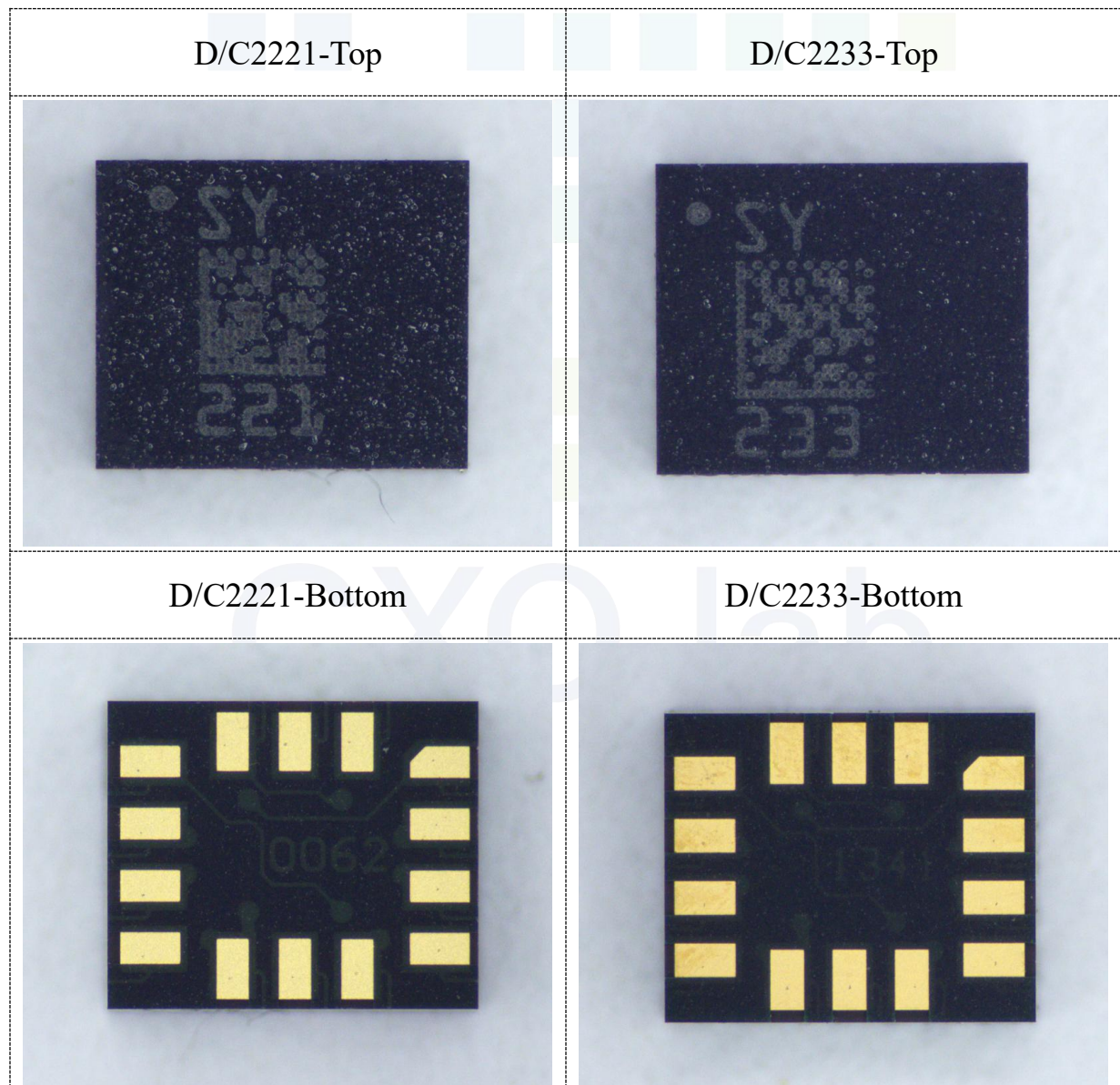
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5. Internal visual inspection:

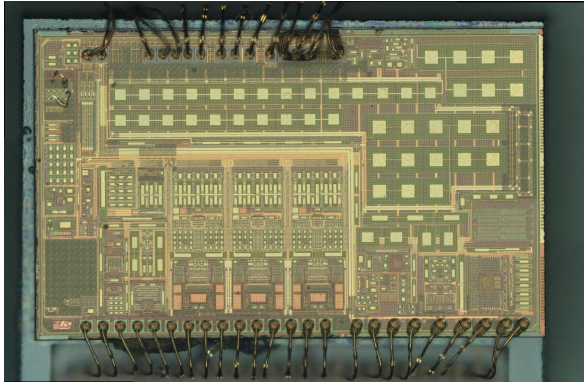
Applicable standard: [AS6081A-2023](#)

Ambient temperature: 24.5 °C Relative humidity: 57.8 % RH

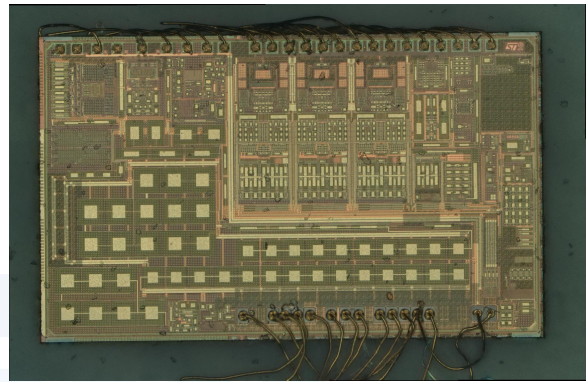
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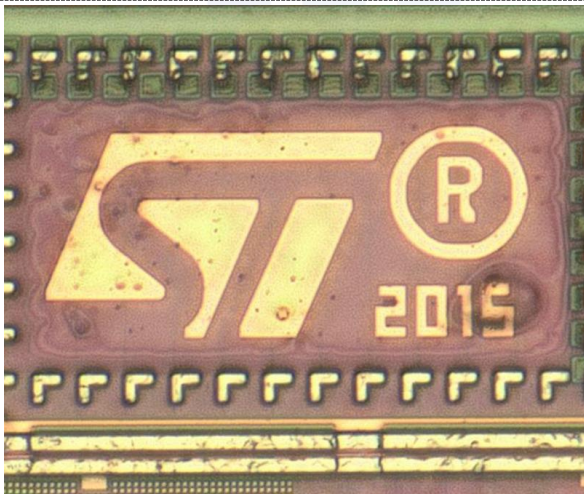
D/C2221-Die1 topography



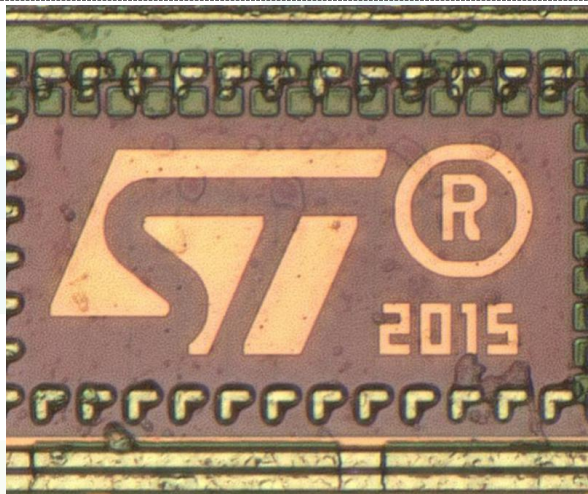
D/C2233-Die1 topography



D/C2221-Die1 logo with copyright



D/C2233-Die1 logo with copyright

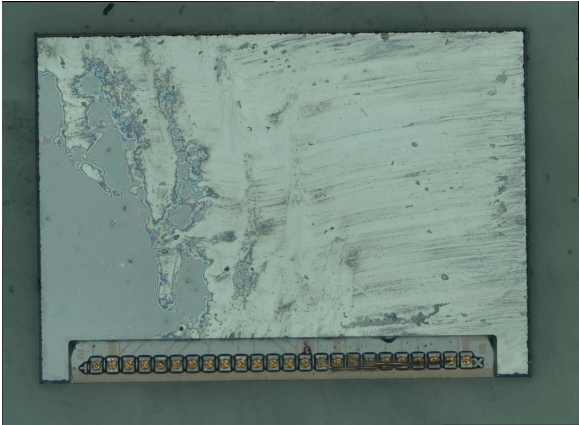
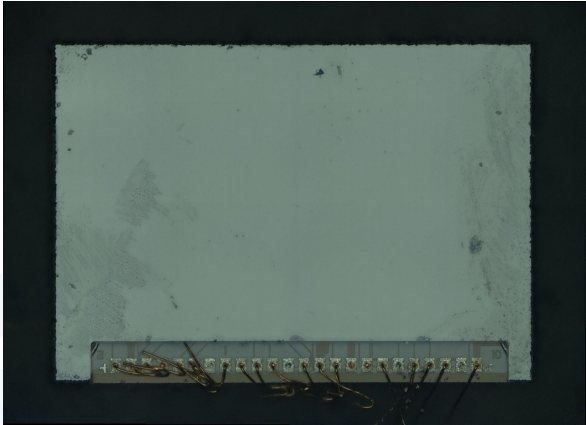
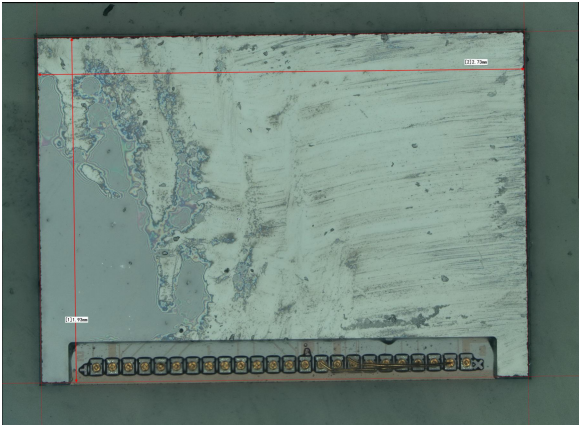
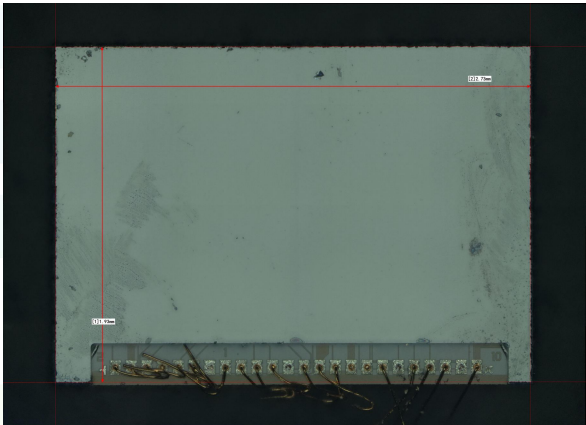


D/C2221-Die1 marking



D/C2233-Die1 marking



D/C2221-Die2 topography	D/C2233-Die2 topography
	
D/C2221-Die2 size	D/C2233-Die2 size
	

-End of Report-

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Disclaimer

1. The test report is invalid without the stamp of “company report seal” and “cross-page seal”.
2. The copy of the test report is invalid without the stamp of “company report seal” and “cross-page seal”.
3. The test report is invalid without the signatures of operator, supervisor and manager.
4. A modified or partial copy of the test report is invalid.
5. When there is disagreement with the test report, please submit the issue to us within 15 days from the date of receipt. Overdue information will not be accepted.
6. The test report is only reflective of the test results of testing samples, not of the quality of batch products.
7. The * indicates subcontract test data.
8. The report is stamped with the CMA mark, indicating that the test items are within the scope of qualification recognition; No CMA mark is stamped, indicating that some/all of the test items are not within the scope of CMA qualification, and the results are for internal use by the customer only.



CXOLab WeChat official account

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