



Chuangxin Online Test Center Laboratory

Add: F/r 401 Building A, Ying Da Feng industrial No,393,Jihua Rd.LongGang
Dis. Shenzhen China
Tel: 0755-83762185 Email: engineer@iclab-cn.com



Report No:	SZ12112020001
Date:	2020/12/11
Page:	1/12

Project Inspection Report

Company : N/A
Address : N/A
Sample Name : 88E1111-B2-BAB1I000
Manufacture : Marvell
Date Code : 1824
Package Type : BGA-117
Sample Number : 380 PCS
Check Number : 380 PCS
Date of Received : 10/29/2020
Date of Tested : 09:00/12/09/2020 ~ 12:00/12/09/2020

WE HEREBY CERTIFY THAT:

The test(s) shown in the attachment were conducted according to the indicating procedures. We assume full responsibility for the accuracy and completeness of these tests and vouch for the qualifications of all personnel performing them.

Inspected by Engineer
Wing

Reviewed by Project Manager
Lucy

Note:

1. This report will be invalid if reproduced in whole or in part.
2. This report refers only to the specimen(s) submitted to test, and is invalid if used separately.
3. This report is only valid with the examination seal and signature of this institute.
4. The tested specimen(s) will only be preserved for thirty days from the date issued, if not collected by the applicant.
5. This report is only responsible for the samples tested.



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Report No:	SZ12112020001
Date:	2020/12/11
Page:	2/12

Items test

- External visual inspection
- Pin Correlation Test
- Programming test
- Solder ability Analysis
- Radiography (X-ray)
- ROHS test
- Key Functional Testing (KFT)
- Baking
- Tape and Reel
- Internal visual inspection

Methods & Equipment

1.1 Applicable Standard

- MIL-STD-883K-2017 2009.13
- MIL-STD-883K-2017 2010.14

1.2 Optical Microscope

- Equipment Spec:
Top view: FINIAL Hi-scope System SEZ-260: X7 ~ X45
FJ-3A: X50 ~ X500

1.3 Digital Caliper

- Equipment Spec:
MASTERPROOF : Standard Digital Caliper 0-150mm

1.4 Testing Environment

- Ambient Temperature: 25±5°C
- Relative Humidity: 45%-65% RH

1.5 Testing Base

- [Marvell 88E1111-B2-BAB1I000]
https://easydatasheet.cn/static/pdf_view/viewer.html?file=https://easydatasheet.cn/pdf/view/bb5a9554dc0417bcdda644483e3dc233bfb0a579.pdf



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Report No:	SZ12112020001
Date:	2020/12/11
Page:	3/12

Analysis Summary

External Visual Inspection:

Applicable Standard: MIL-STD-883K-2017 2009.13

External Visual Inspection on 50 PCS samples marked with D/C 1824. No sanding marks, crack or chips were observed on all inspected. Evidence of secondary coating was found on all inspected. Device failed top permanency tested. Substrate show residues on all inspected. BGA show indentation on all inspected. Devices package and dimension matched to manufacturer's specification. All devices failed the external visual inspection.

Specification dimension:

D: 9.90 - 10.10 MM

E: 13.90 - 14.10 MM

A: 1.54 MAX MM

Measurement dimension:

D: 10.03 MM

E: 14.06 MM

A: 1.39 MM

Internal Visual Inspection:

Applicable Standard: MIL-STD-883K-2017 2010.14

Internal Visual Inspection was verified on (#1) sample. Manufacturer MARVELL marking were found with 2003 copyright year. Die Marking E1111 were found on the die surface. Device confirmed to be a MARVELL device.



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Report No:	SZ12112020001
Date:	2020/12/11
Page:	4/12

External Visual Inspection Result:

External Visual Criteria	Yes/No	Result
Mix-up	No	Pass
Top Scratches	No	Pass
Bottom Scratches	No	Pass
Contamination	No	Pass
Cracks	No	Pass
Copper defect	No	Pass
Indentation	Yes	Exist
Residues	Yes	Exist
Oxidization	No	Pass
Coplanarity	Yes	Pass
Sanding Marks	No	Pass
Secondary Coating	Yes	Failed
Top permanency test	Yes	Failed

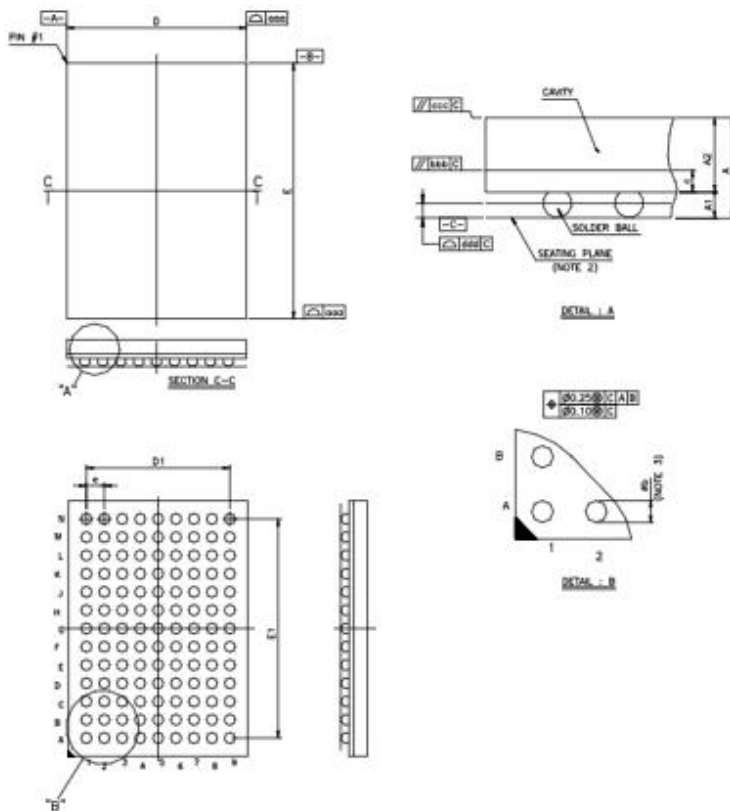


Report No:	SZ12112020001
Date:	2020/12/11
Page:	5/12

1. Device Description:

The Alaska® Ultra88E1111 Gigabit Ethernet Transceiver is a physical layer device for Ethernet 1000BASE-T, 100BASE-TX, and 10BASE-T applications. It is manufactured using standard digital CMOS process and contains all the active circuitry required to implement the physical layer functions to transmit and receive data on standard CAT 5 unshielded twisted pair.

2. Package Dimensions:



Dimensions in mm			
Symbol	MIN	NOM	MAX
A	--	--	1.54
A1	0.40	0.50	0.60
A2	0.84	0.89	0.94
c	0.32	0.36	0.40
D	9.90	10.00	10.10
E	13.90	14.00	14.10
D1	--	8.00	--
E1	--	12.00	--
e	--	1.00	--
b	0.50	0.60	0.70
aaa		0.20	
bbb		0.25	
ccc		0.35	
ddd		0.15	
MD/ME			

NOTE:

1. CONTROLLING DIMENSION: MILLIMETER.
2. PRIMARY DATUM C AND SEATING PLANE ARE DEFINED BY THE SPHERICAL CROWNS OF THE SOLDER BALLS.
3. DIMENSION b IS MEASURED AT THE MAXIMUM SOLDER BALL DIAMETER, PARALLEL TO PRIMARY DATUM C.



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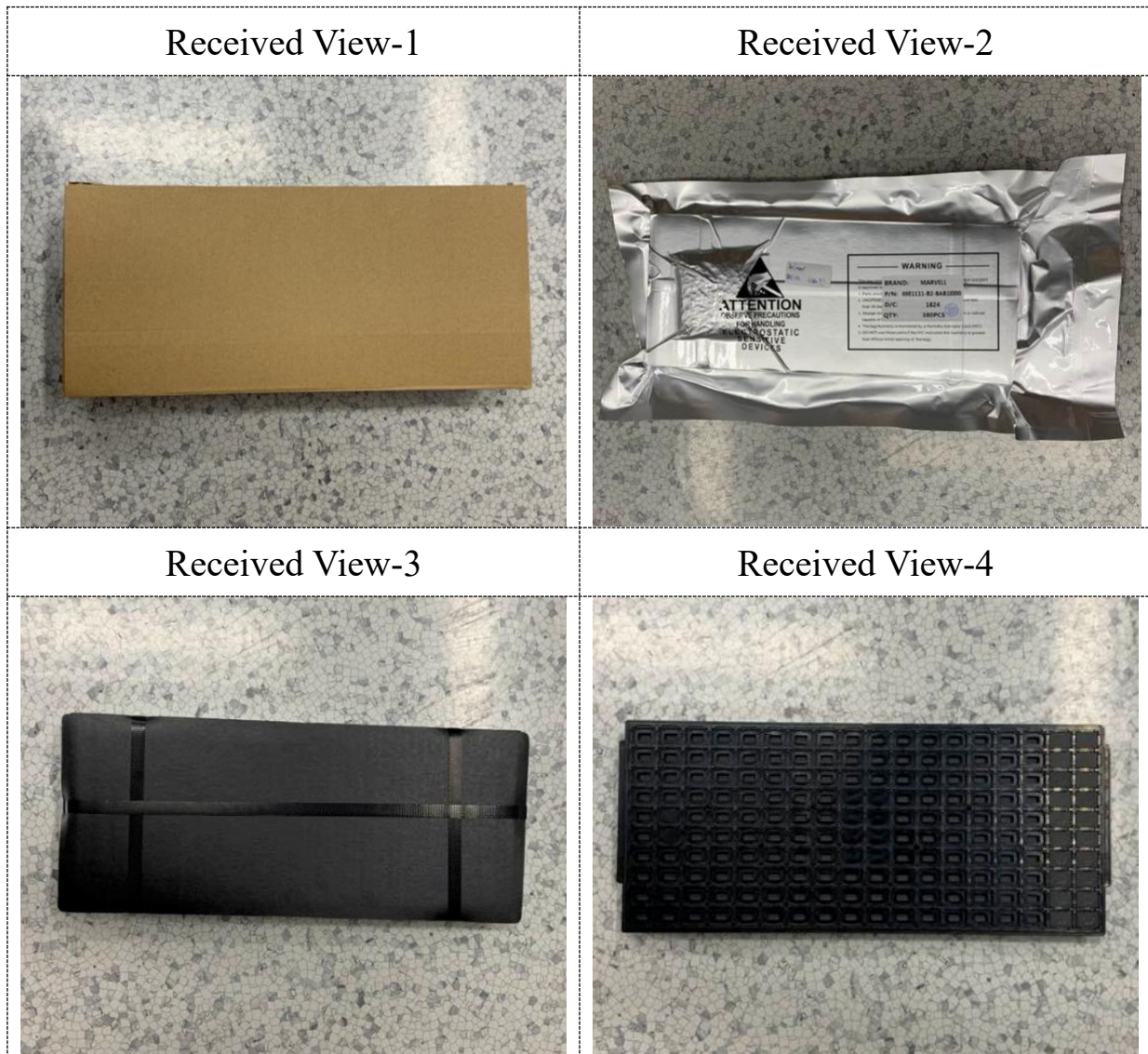


Report No:	SZ12112020001
Date:	2020/12/11
Page:	6/12

3. Receiving Inspection:

Gross Weight	950 g	Parts Total	380 PCS
Number Of Boxes	1	Full Label	Non Present
Package type	Tray	Moisture protection	Acceptable
MSL	N/A	ESD protection	Acceptable

Note: Customer provided 380 PCS of D/C 1824 samples. External visual inspection on 50 PCS and Internal visual inspection was verified on 1 PCS.





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Report No:	SZ12112020001
Date:	2020/12/11
Page:	7/12

4. External Visual Inspection:

Applicable Standard: MIL-STD-883K-2017 2009.13

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Specification dimension:

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A: 1.54 MAX MM

Measurement dimension:

D: 10.03 MM

E: 14.06 MM

A: 1.39 MM



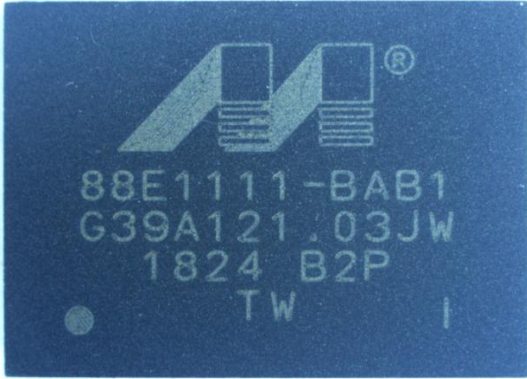
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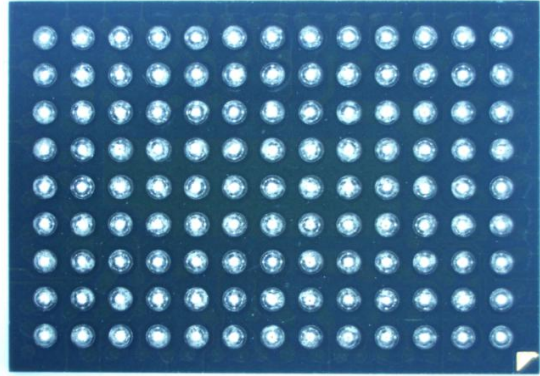


Report No:	SZ12112020001
Date:	2020/12/11
Page:	8/12

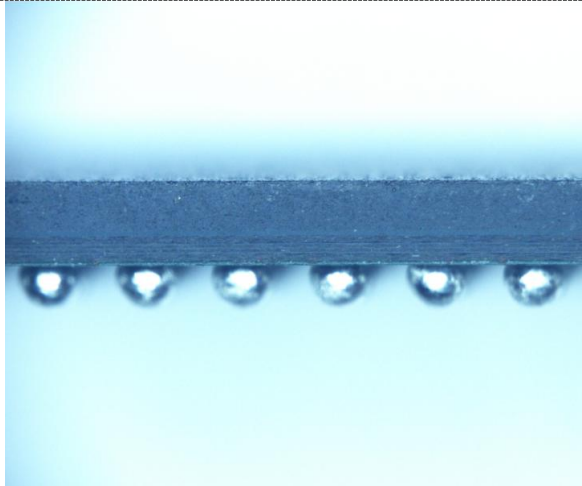
Top



Bottom



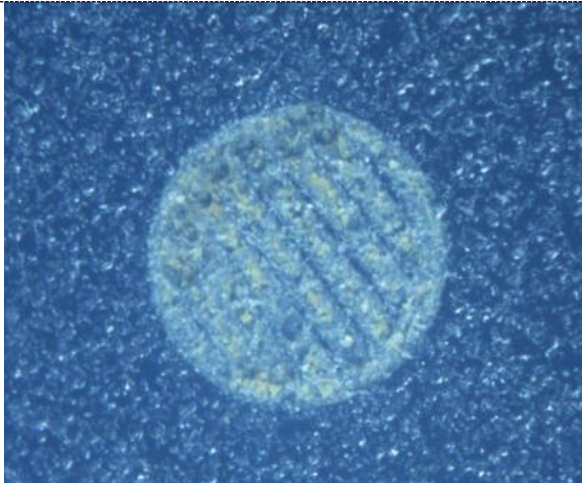
Side



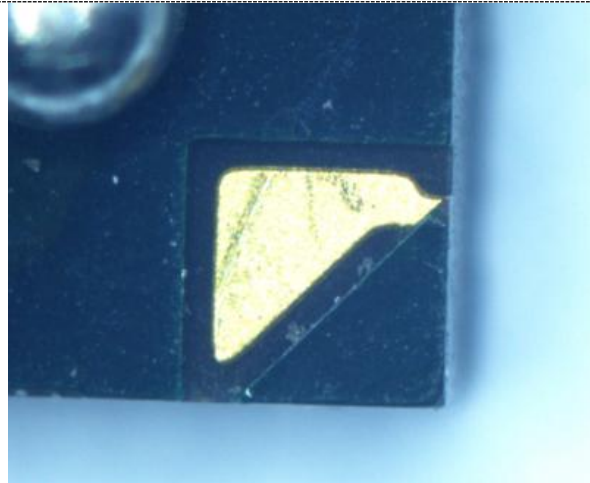
Laser Marking



Top Pin



Bottom Pin





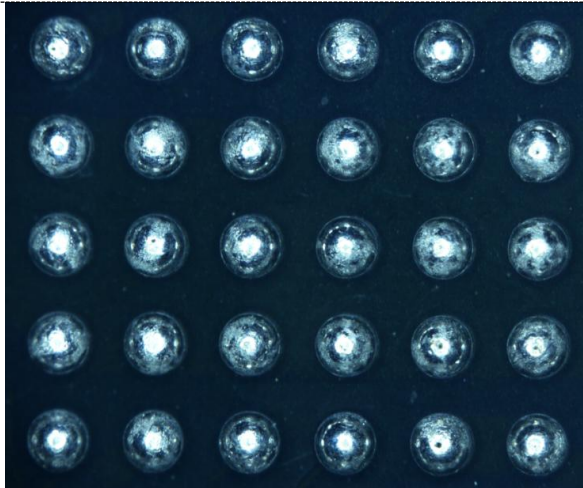
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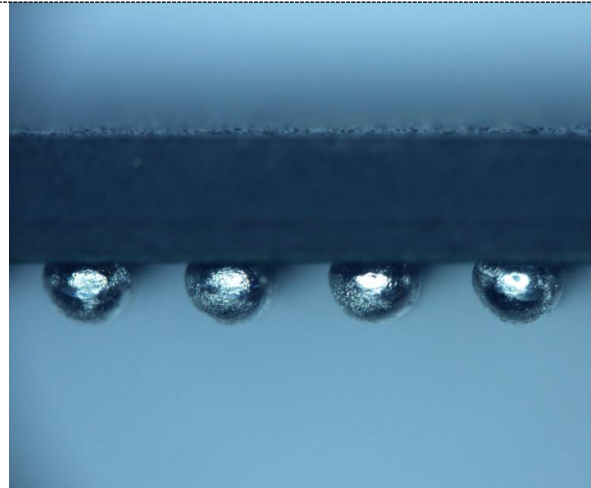
Report No:	SZ12112020001
Date:	2020/12/11
Page:	9/12

BGA



D = 10.03 MM

Side BGA



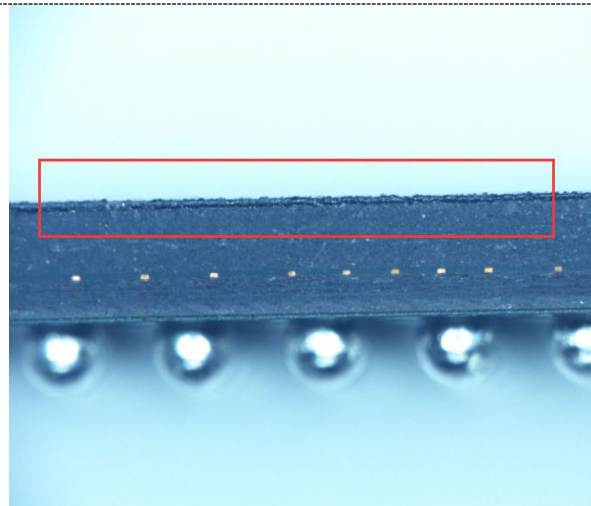
E = 14.06 MM



A = 1.39 MM

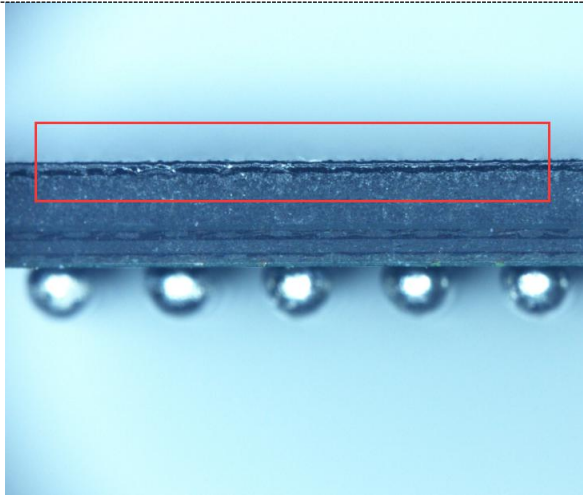


Secondary Coating-1

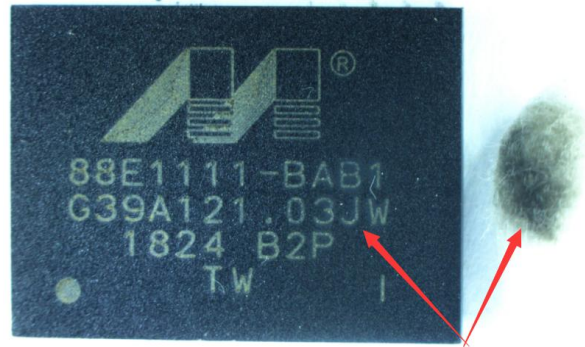


Report No:	SZ12112020001
Date:	2020/12/11
Page:	10/12

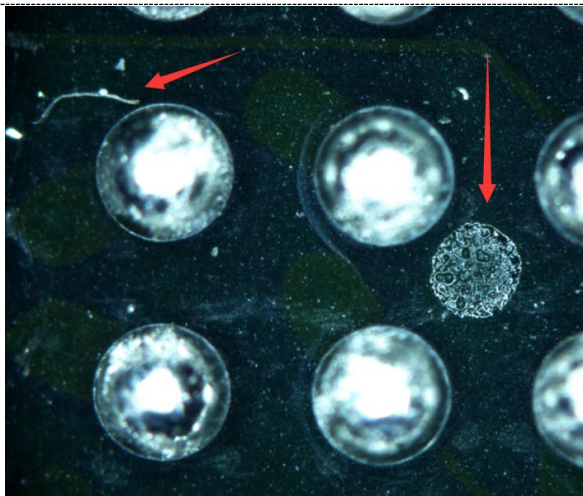
Secondary Coating-2



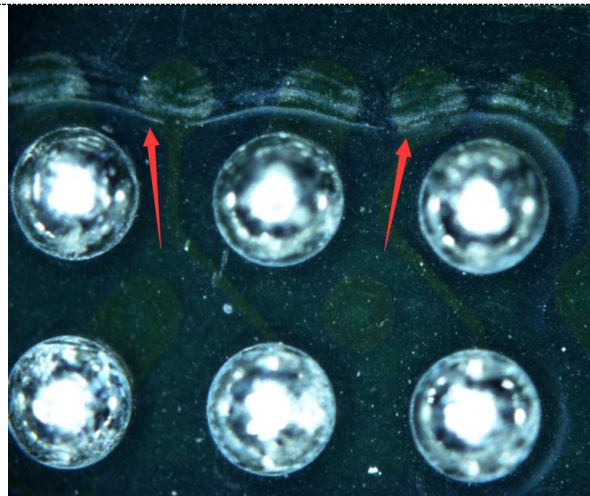
Top Permanency Tested (Failed)



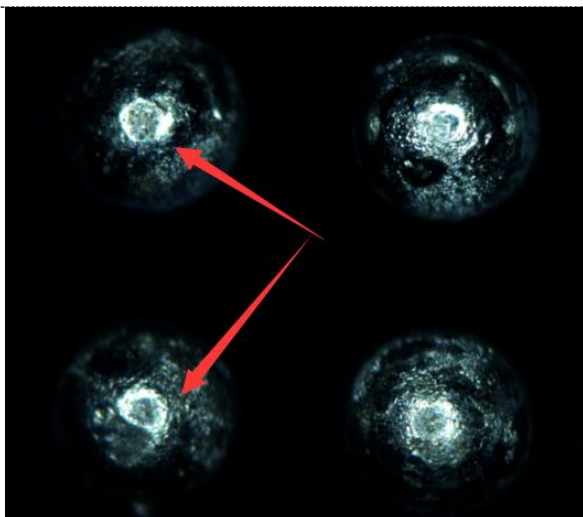
Substrate Residues-1



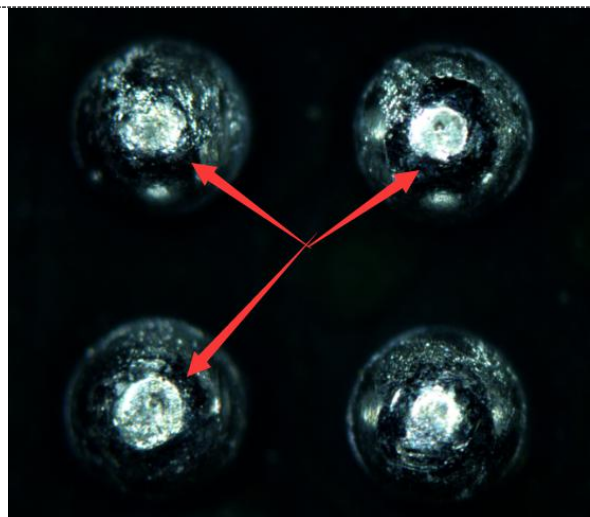
Substrate Residues-2



BGA Indentation-1



BGA Indentation-2





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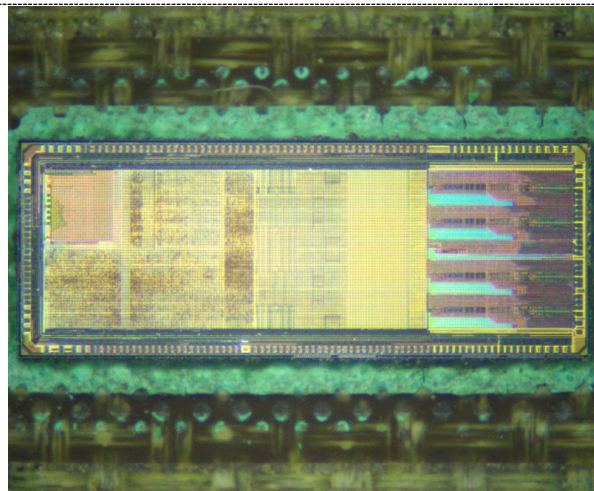
Report No:	SZ12112020001
Date:	2020/12/11
Page:	11/12

5.Internal Visual Inspection:

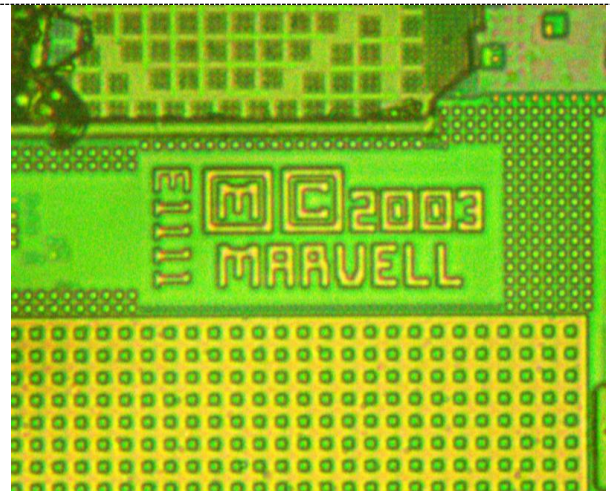
Applicable Standard: MIL-STD-883K-2017 2010.14

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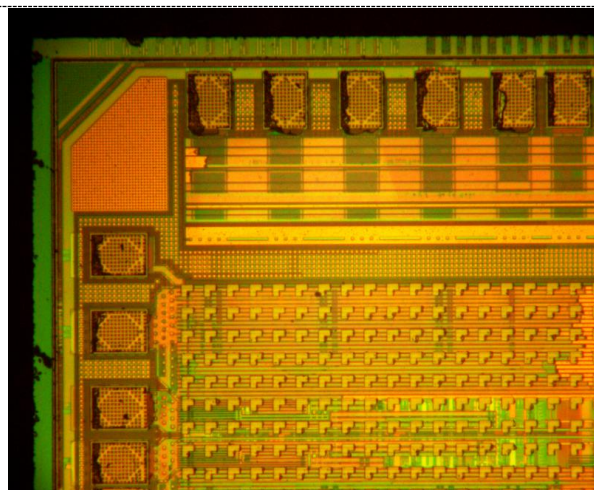
#1-Die Topography



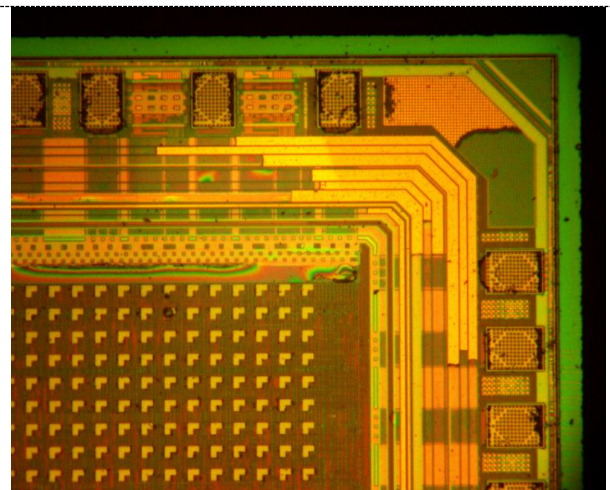
#1-Die logo



#1-Die Corner-1



#1-Die Corner-2





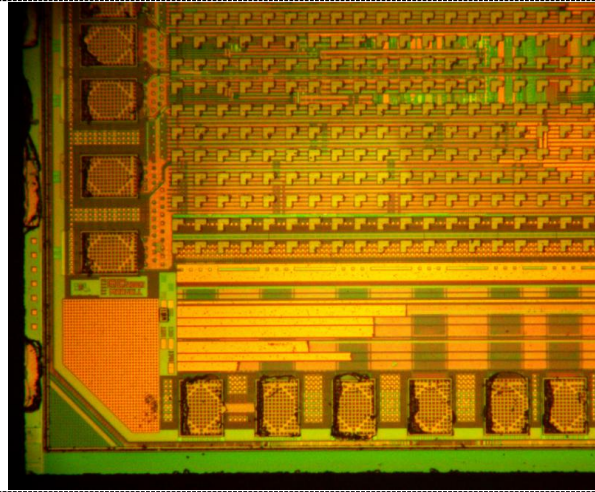
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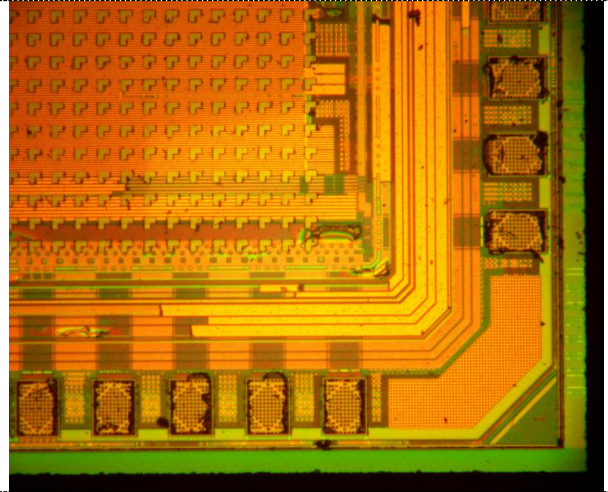


Report No:	SZ12112020001
Date:	2020/12/11
Page:	12/12

#1-Die Corner-3



#1-Die Corner-4



End

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CXO Lab WeChat official account

