



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: chenlp@iclab-cn.com



Report No:	SZ12162020006
Date:	2020/12/16
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Project Inspection Report

Company : N/A
Address : N/A
Sample Name : S912ZVMC12F3MKH
Manufacture : FREESCALE
Date Code : 1748
Sample Number : 5 PCS
Check Number : 5 PCS
Date of Received : 12/14/2020
Date of Tested : 13:00/12/14/2020~14:50/12/14/2020

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
Cherry

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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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 2003.13

1.2 Optical Microscope

- Equipment Spec.:
Top view: FINIAL Hi-scope System SEZ-260: X7 ~ X45

1.3 Testing environment

- Ambient temperature: $25 \pm 5^{\circ}\text{C}$
Relative humidity: 45%-65%RH

1.4 Testing base

- 《FREESCALE S912ZVMC12F3MKH》 :

<https://4donline.ihs.com/images/VipMasterIC/IC/PHGL/PHGL-S-A0005490490/PHGL-S-A0005490490-1.pdf?hkey=EF798316E3902B6ED9A73243A3159BB0>



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Analysis Summary

Solderability Analysis:

Solderability test was performed on 5 PCS samples marked with samples (#1-#5) using the dip and look methods. All devices failed solderability test. The dipped portion of the terminations is less than 95% covered by a continuous new solder coating.

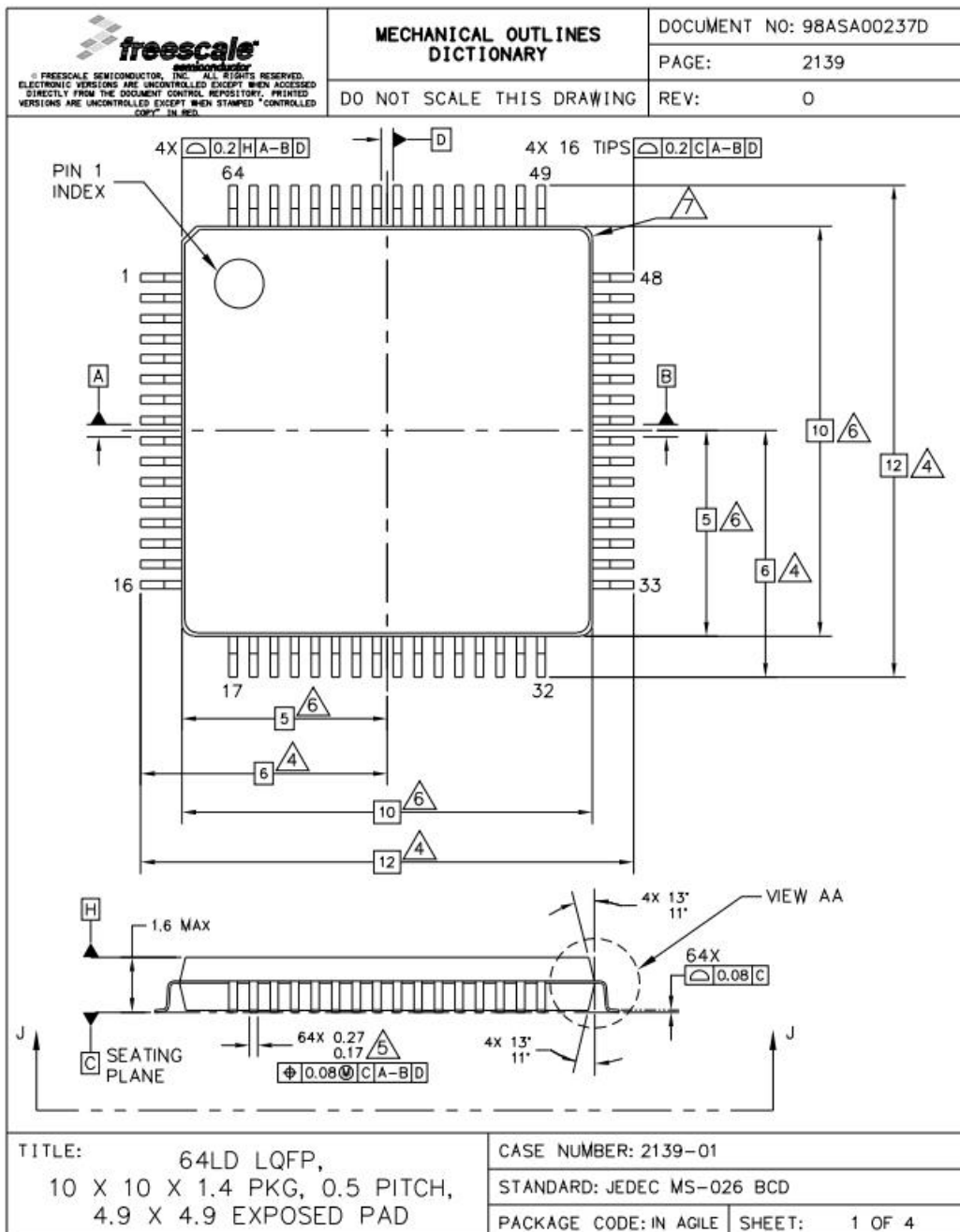


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1. Device Description:

The MC9S12ZVM-Family is an automotive 16-bit microcontroller family using the NVM + UHV technology that offers the capability to integrate 40 V analog components. This family reuses many features from the existing S12/S12X portfolio. The particular differentiating features of this family are the enhanced S12Z core, the combination of dual-ADC synchronized with PWM generation and the integration of “high-voltage” analog modules, including the voltage regulator (VREG), Gate Drive Unit (GDU) and a Local Interconnect Network (LIN) physical layer. These features enable a fully integrated single chip solution to drive up to 6 external power MOSFETs for BLDC or PMSM motor drive applications.

2. Package dimensions:





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3.Receiving Inspection:

Gross Weight:	59 g	Parts Total	5 PCS
Number Of Boxes	1	intact label	Non Present
Package type	Bulk	Moisture protection	Non Present
MSL	N/A	ESD protection	Acceptable

Received View-1



Received View-2





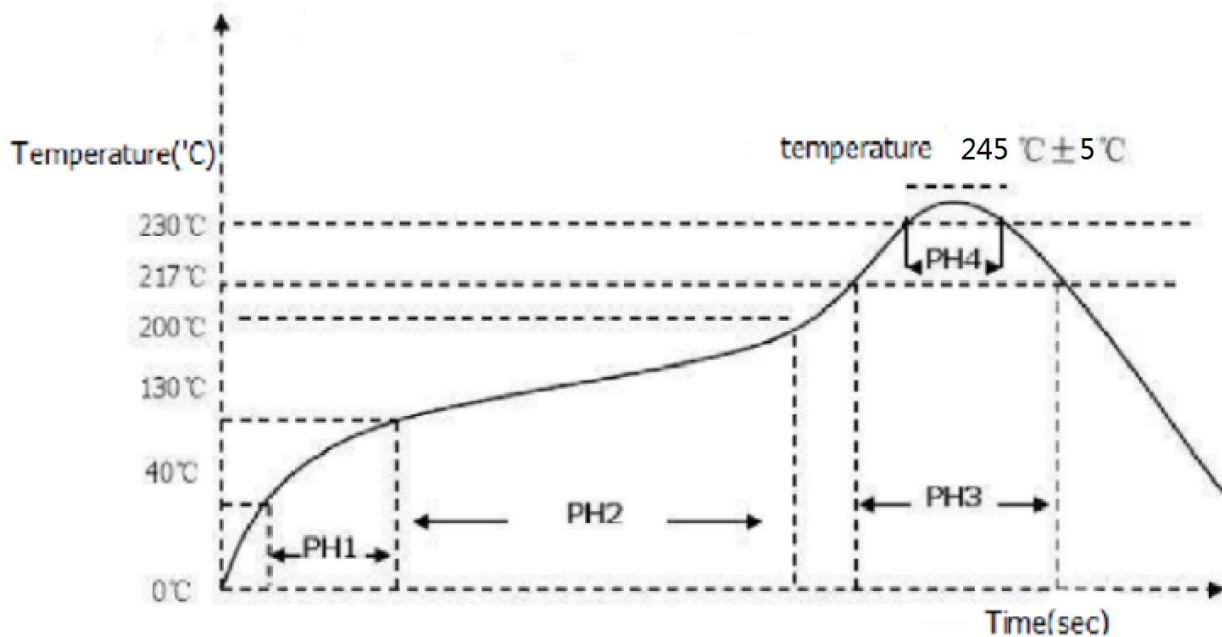
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4. Solderability Analysis:

Applicable Standard: MIL-STD-883 Method 2003.13

Solderability test was performed on 5 PCS samples marked with samples (#1-#5) using the dip and look methods. All devices failed solderability test. The dipped portion of the terminations is less than 95% covered by a continuous new solder coating.

Testing condition:



Furnace temperature curve analysis

Room Temperature	20.8°C	Relative Humidity	47%
Immersion speed and lifting speed	0.984 in	Flux Immersion Angle	45°
Solder Pot Temperature	245°C	Solder material	Sn96.5Ag3.0Cu0.5
Solder Method	Dip and Look Test	Solder Immersion Time	5S



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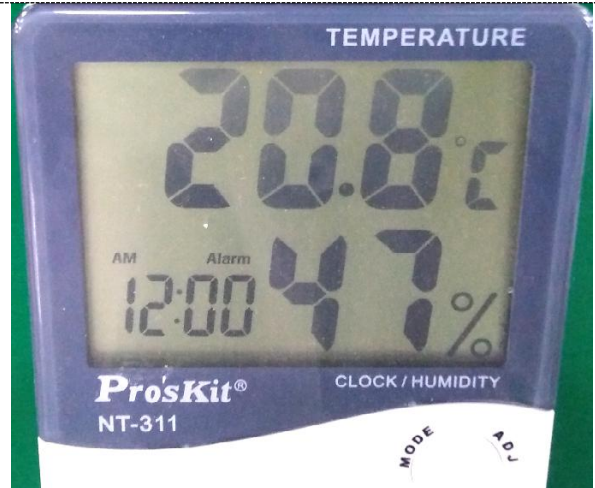


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Tin Furnace Temperature



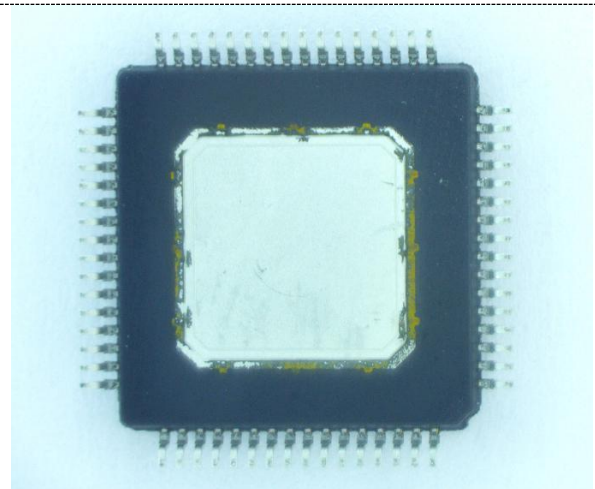
Humidity



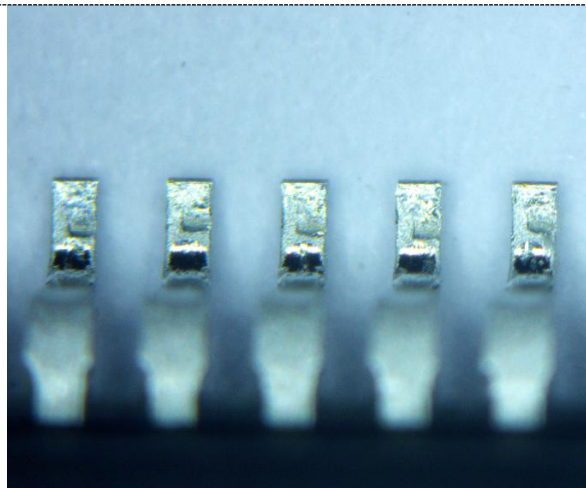
#1-Before Top View



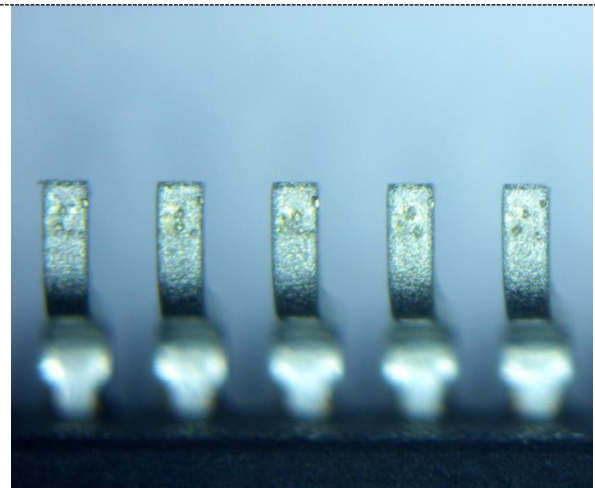
#1-Before Bottom View



#1-Before Top Leads



#1-Before Bottom Leads





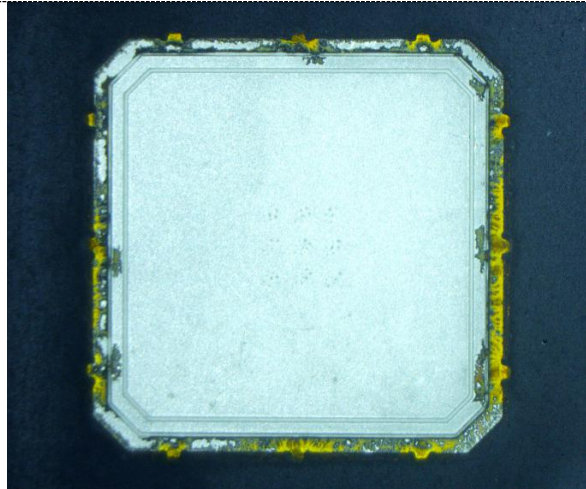
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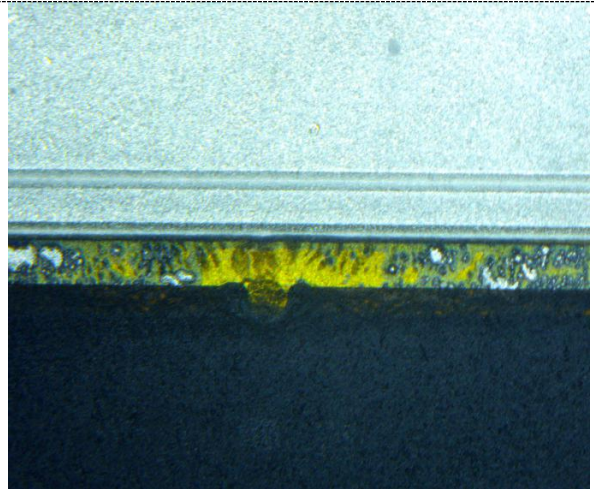


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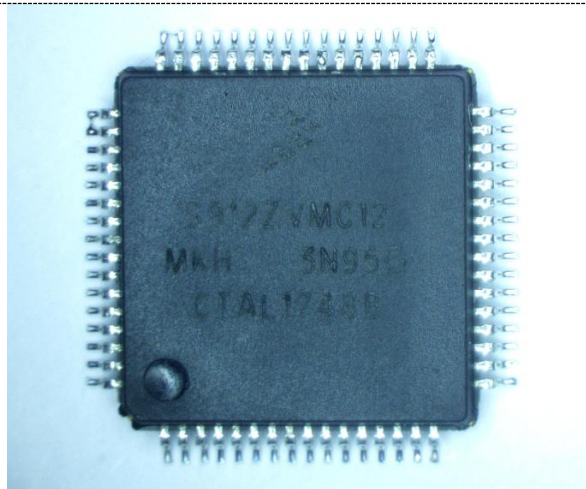
#1-Before Sink View-1



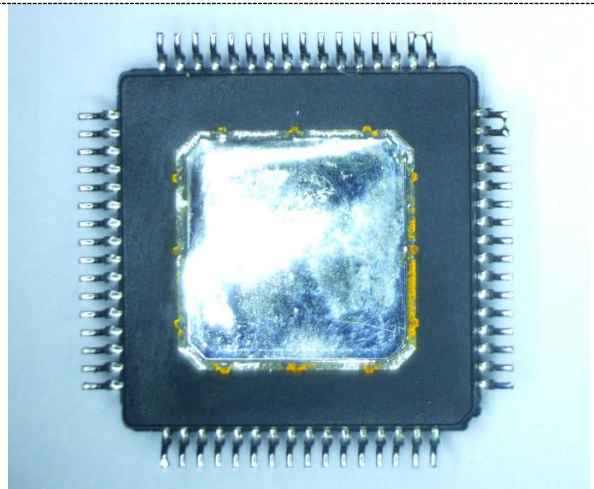
#1-Before Sink View-2



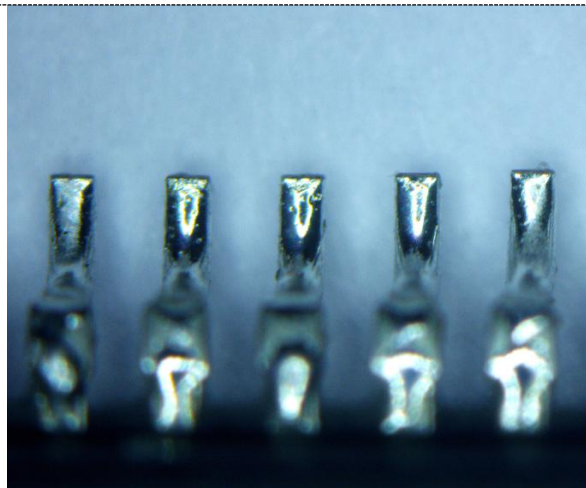
#1-After Top View



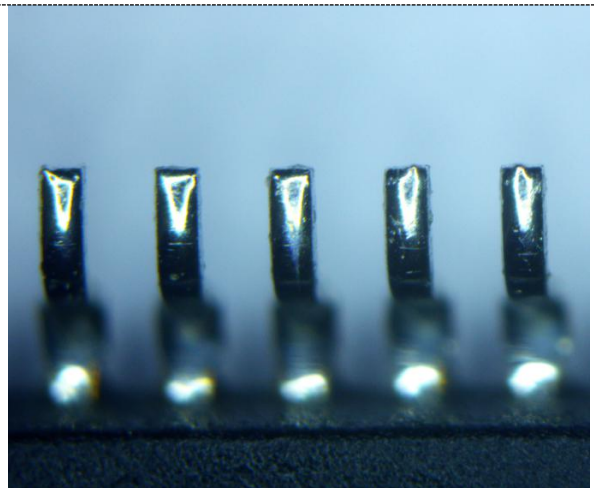
#1-After Bottom View



#1-After Top Leads



#1-After Bottom Leads





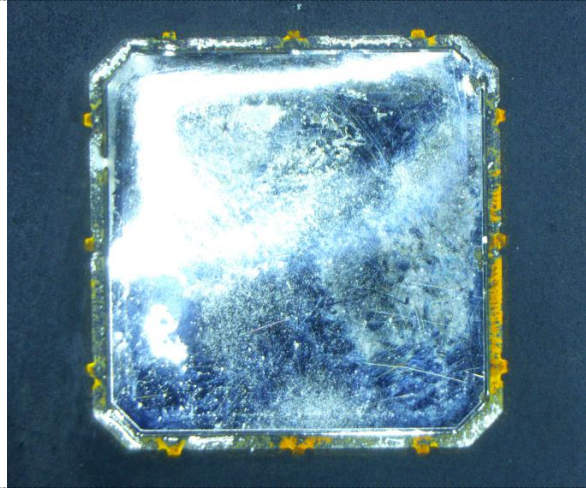
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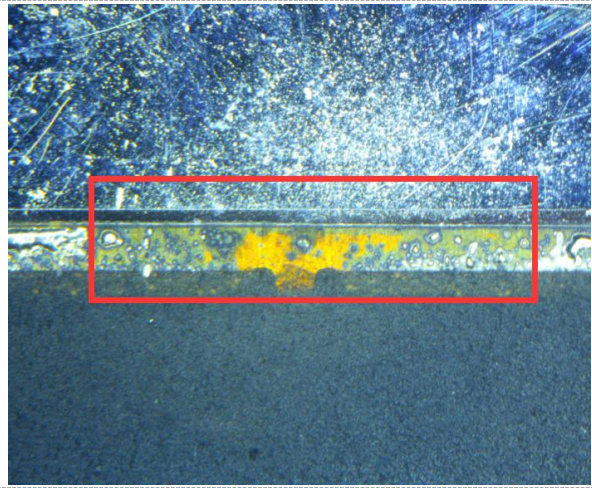


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#1-After Sink View-1



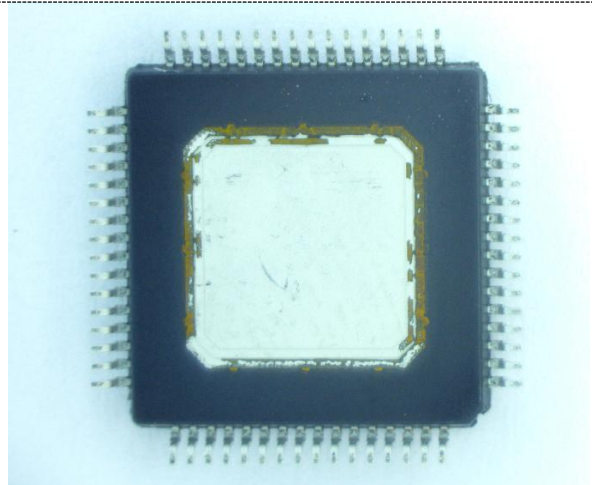
#1-After Sink View-2



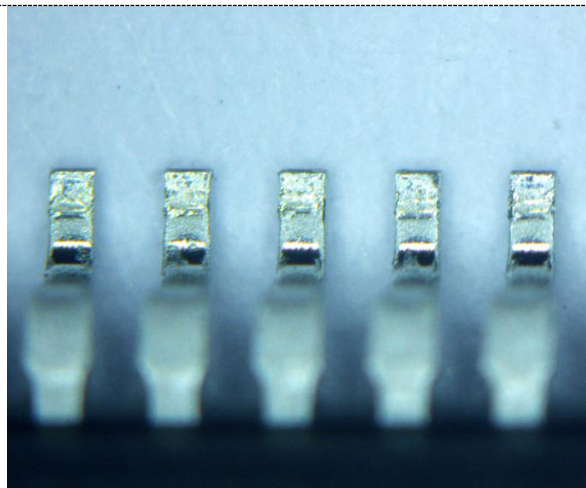
#2-Before Top View



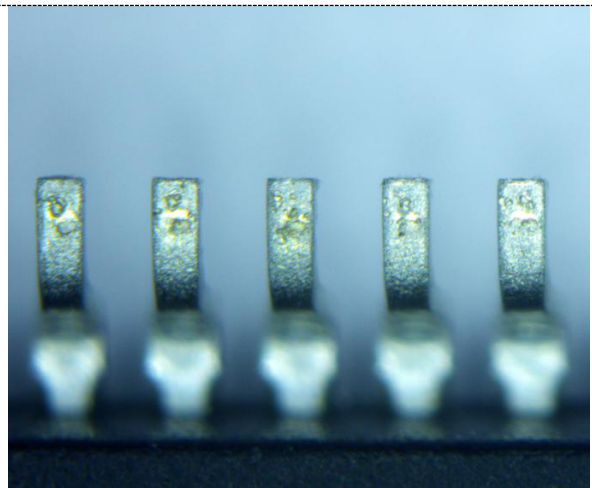
#2-Before Bottom View



#2-Before Top Leads



#2-Before Bottom Leads





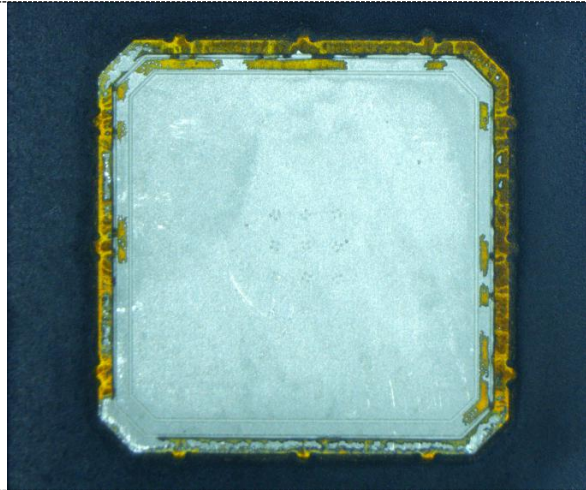
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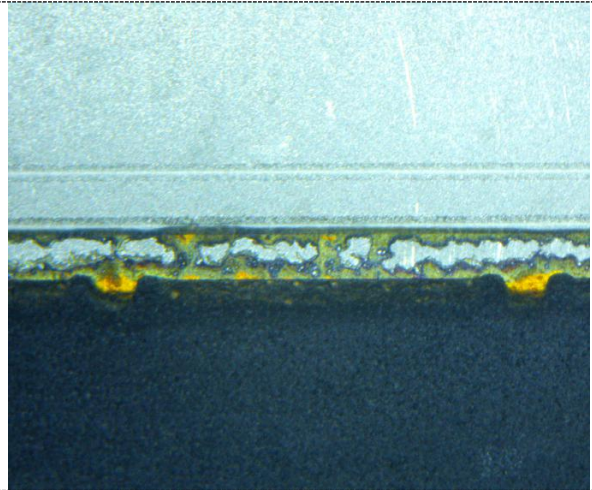


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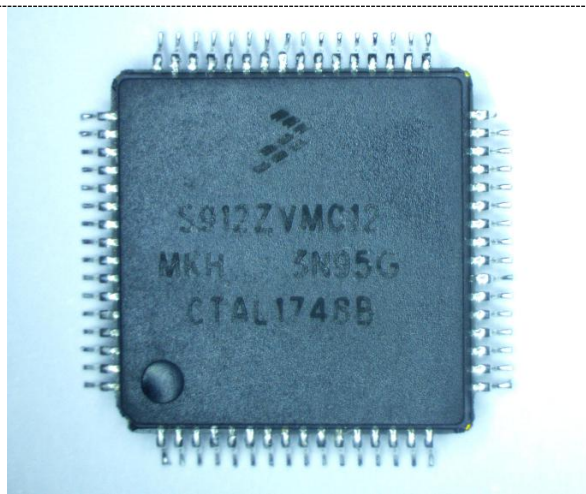
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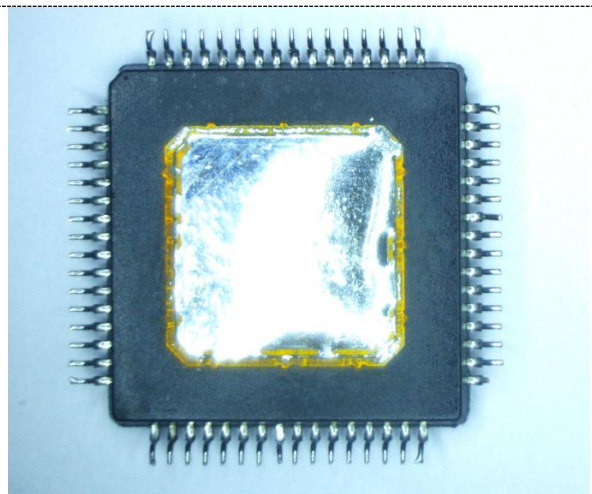
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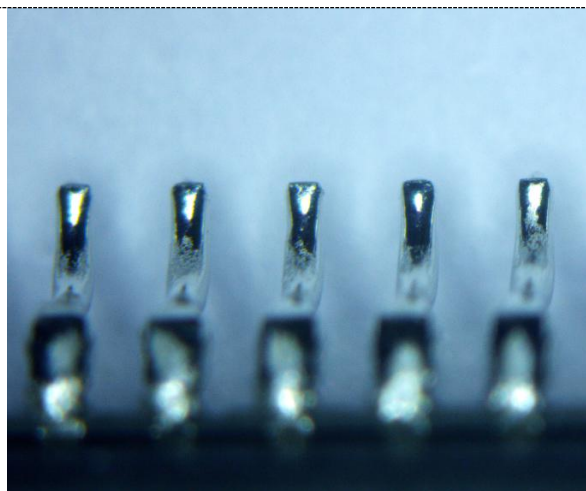
#2-After Top View



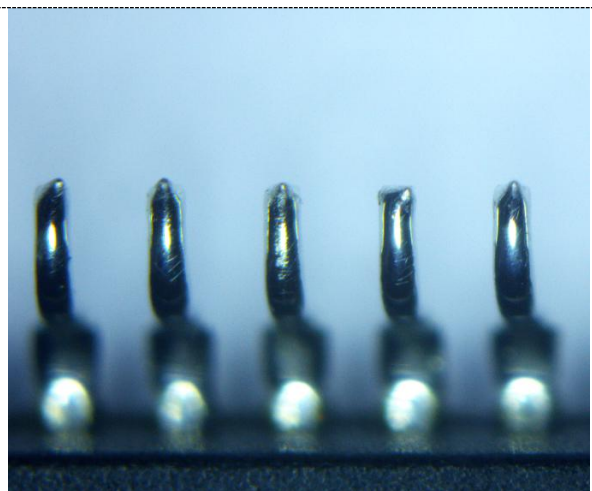
#2-After Bottom View



#2-After Top Leads



#2-After Bottom Leads





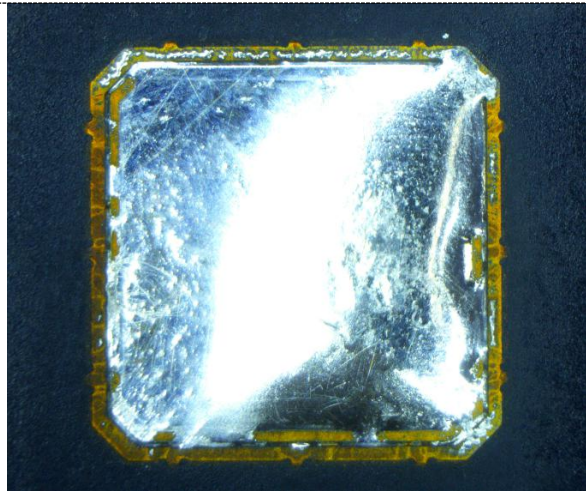
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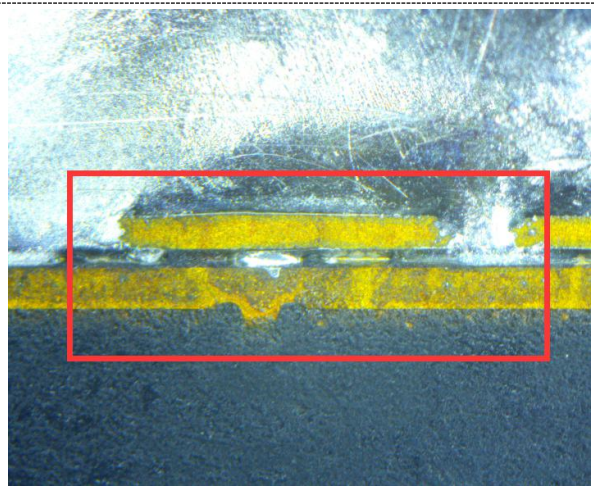


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#2-After Sink View-1



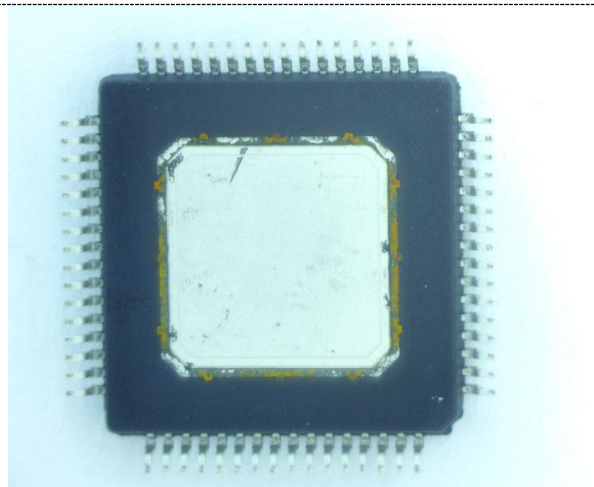
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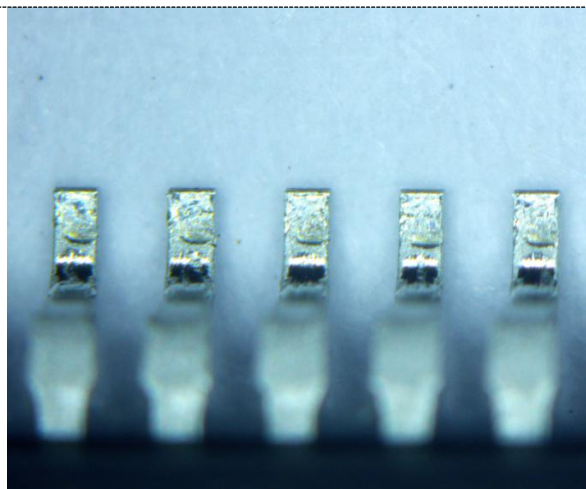
#3-Before Top View



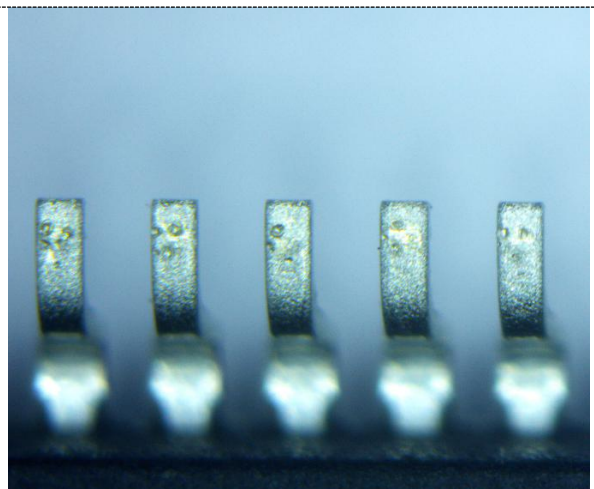
#3-Before Bottom View



#3-Before Top Leads



#3-Before Bottom Leads





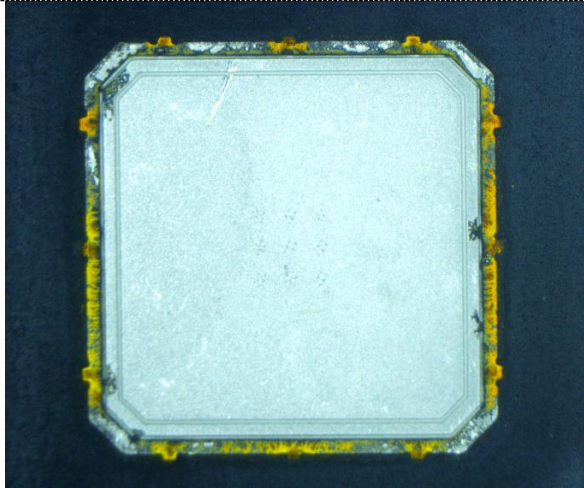
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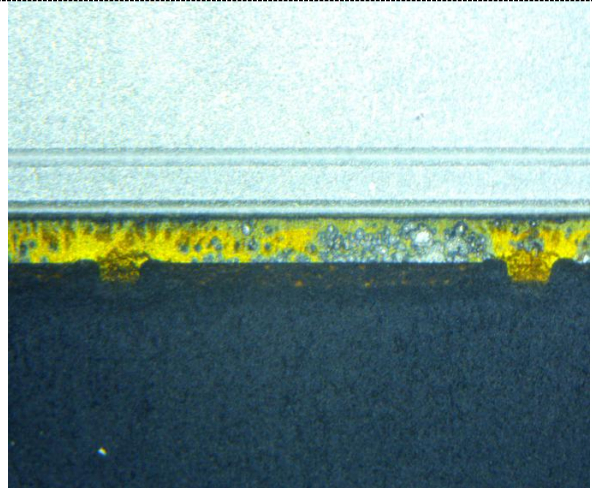


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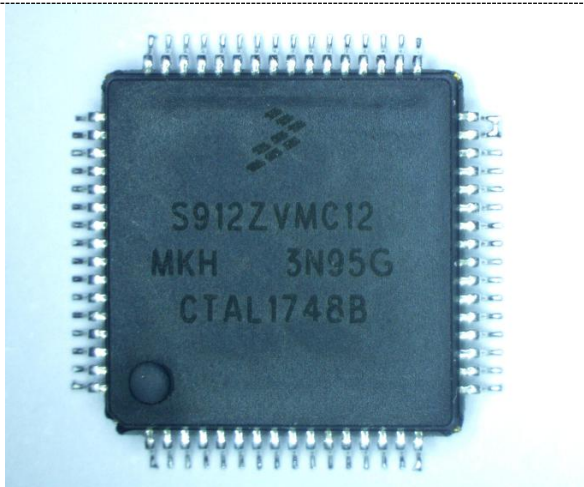
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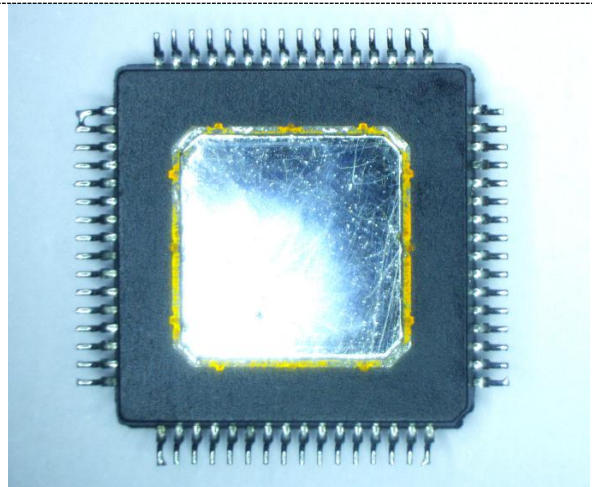
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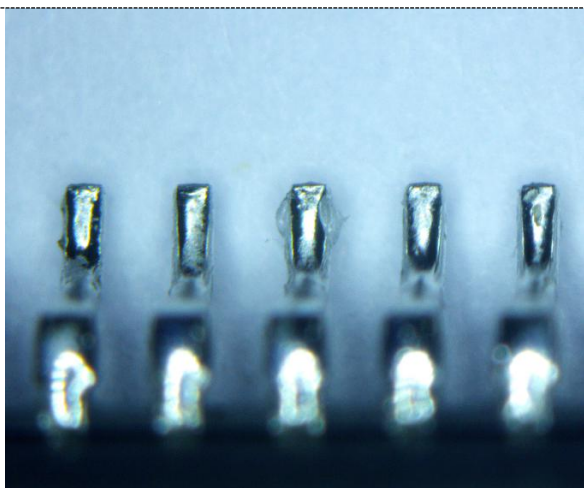
#3-After Top View



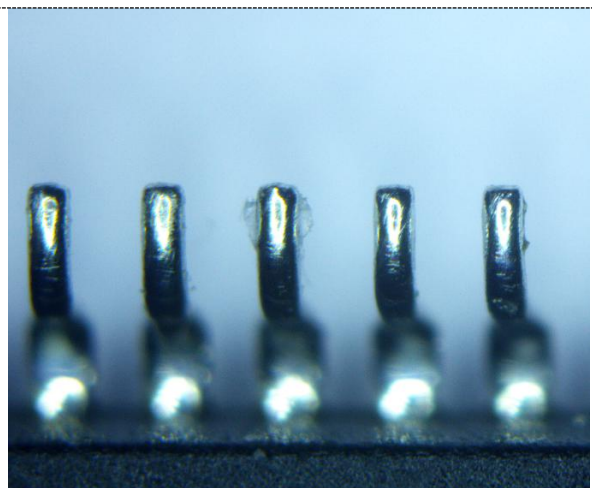
#3-After Bottom View



#3-After Top Leads



#3-After Bottom Leads





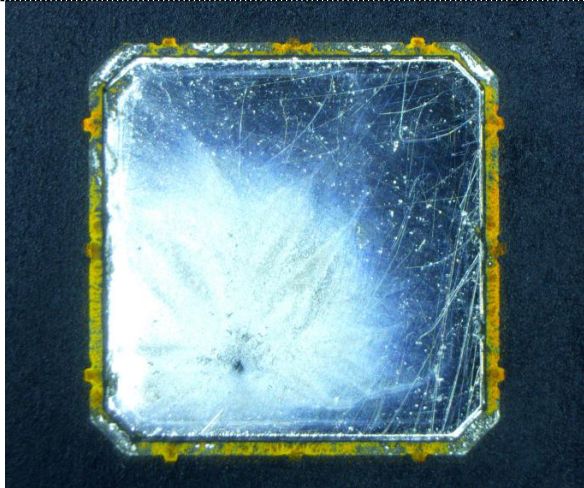
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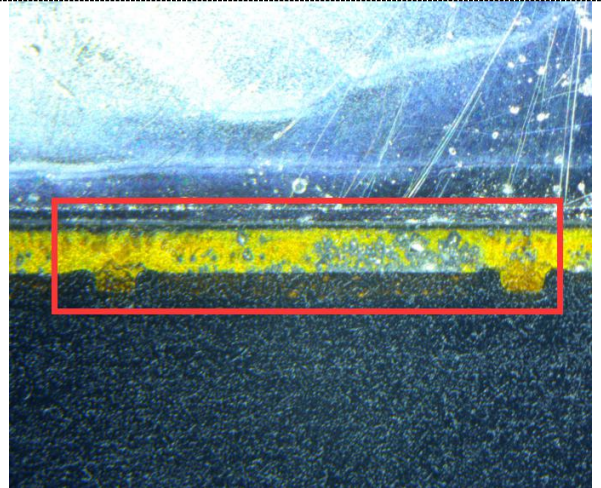


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#3-After Sink View-1



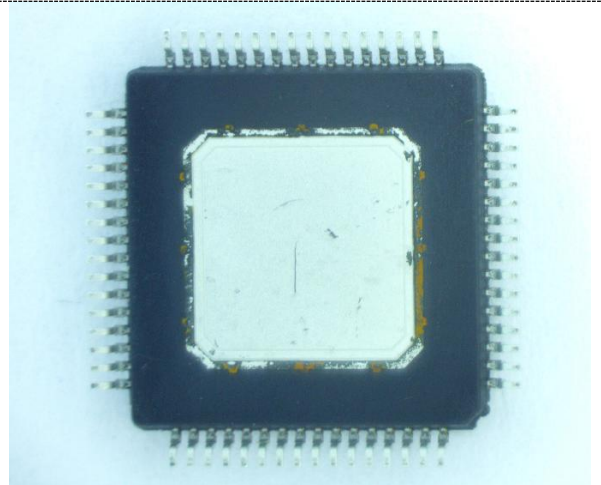
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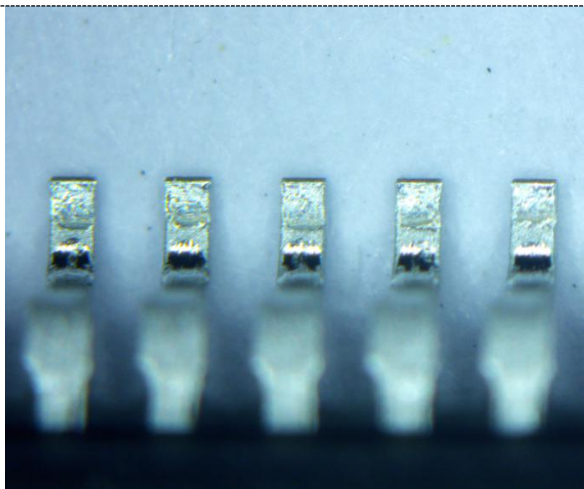
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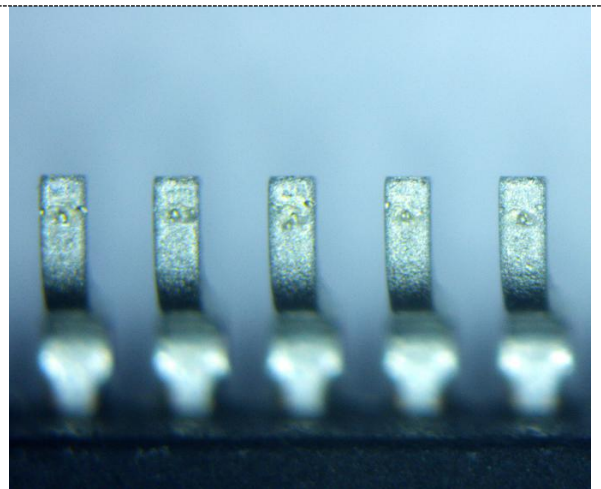
#4-Before Bottom View



#4-Before Top Leads



#4-Before Bottom Leads





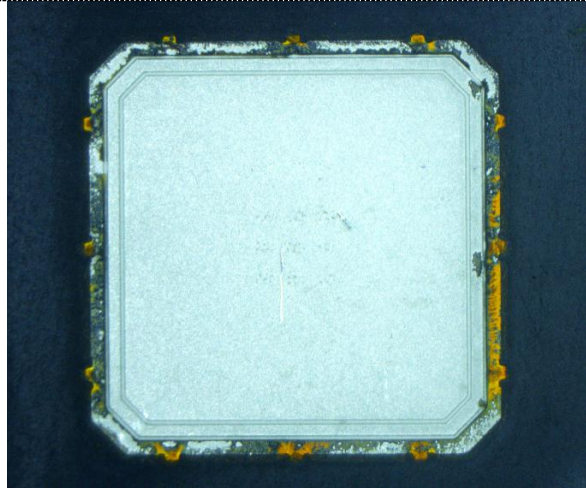
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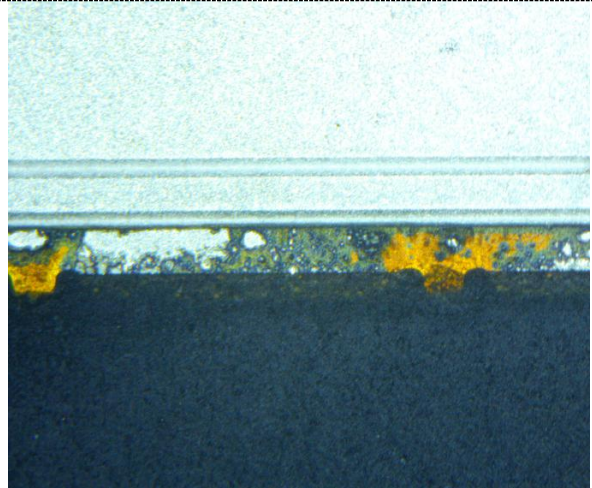


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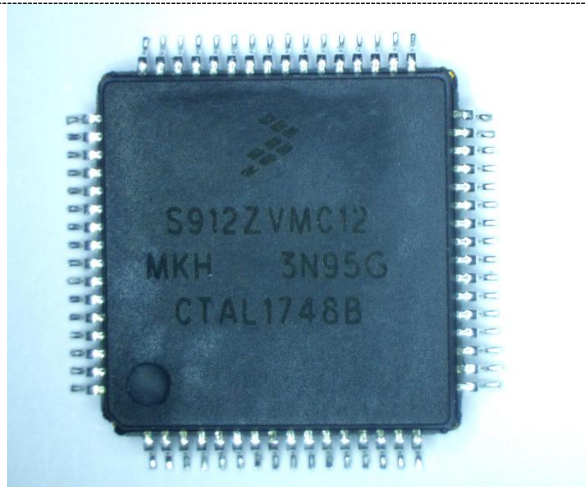
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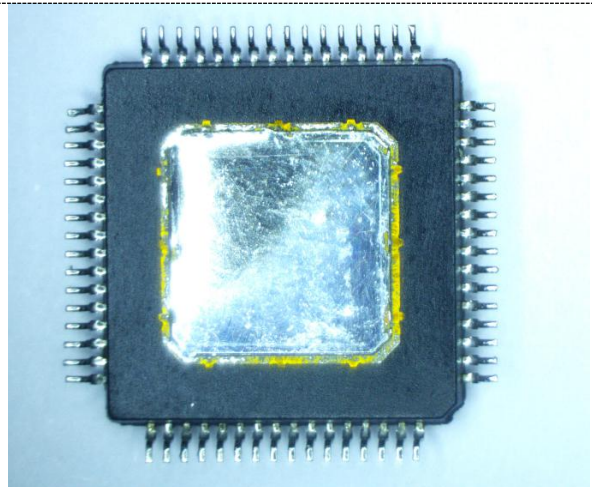
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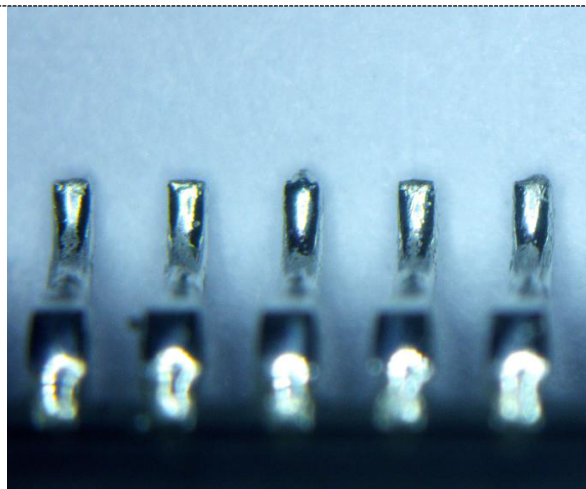
#4-After Top View



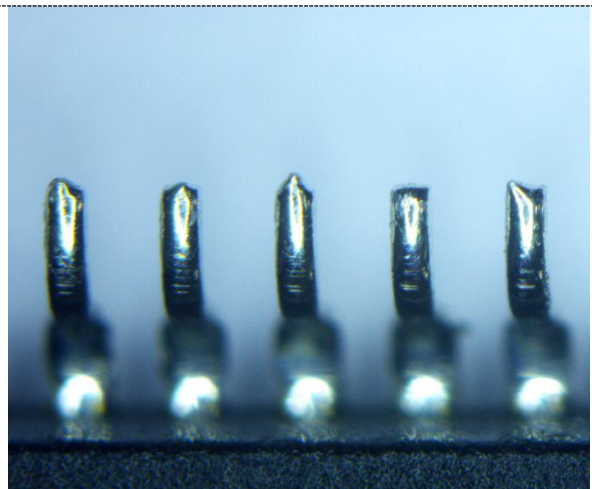
#4-After Bottom View



#4-After Top Leads



#4-After Bottom Leads





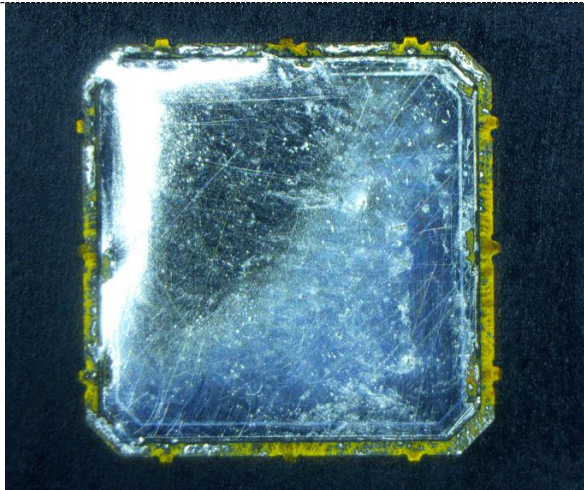
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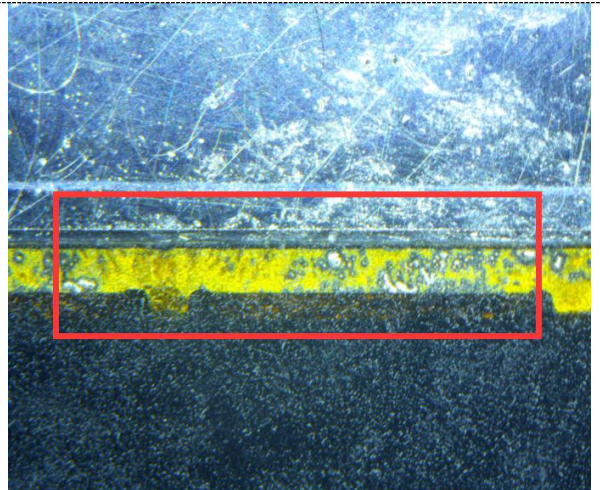


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#4-After Sink View-1



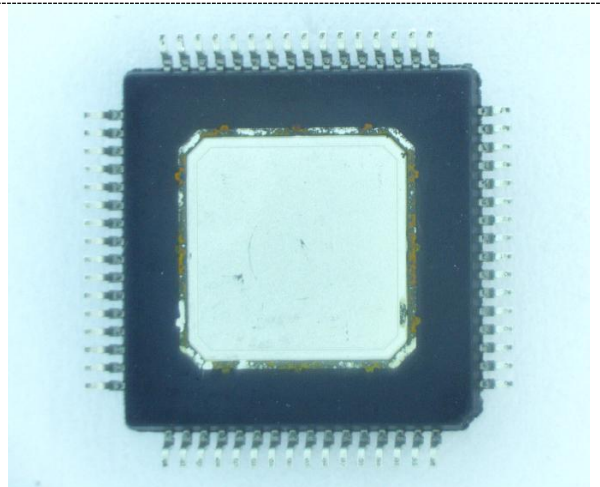
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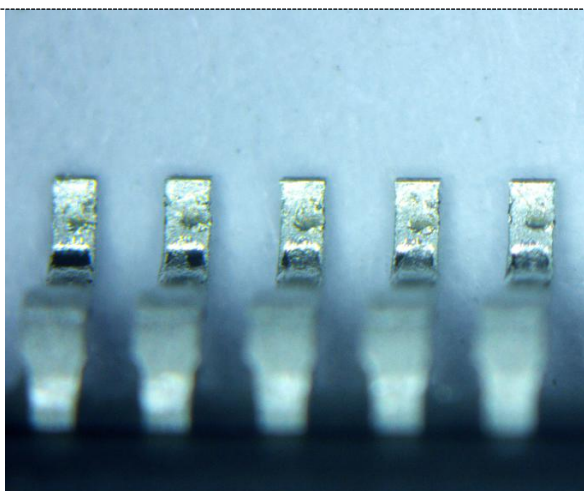
#5-Before Top View



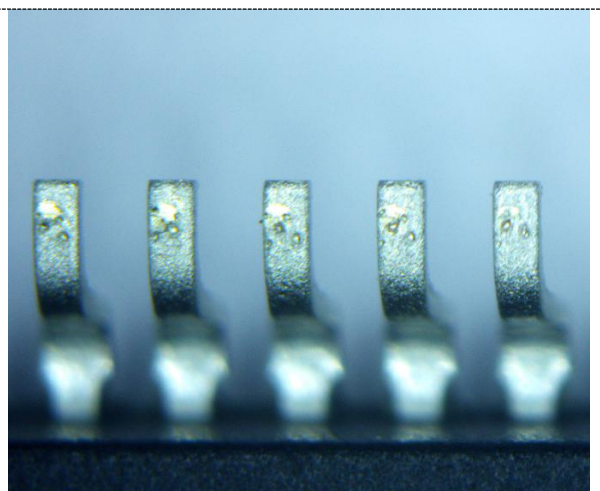
#5-Before Bottom View



#5-Before Top Leads



#5-Before Bottom Leads





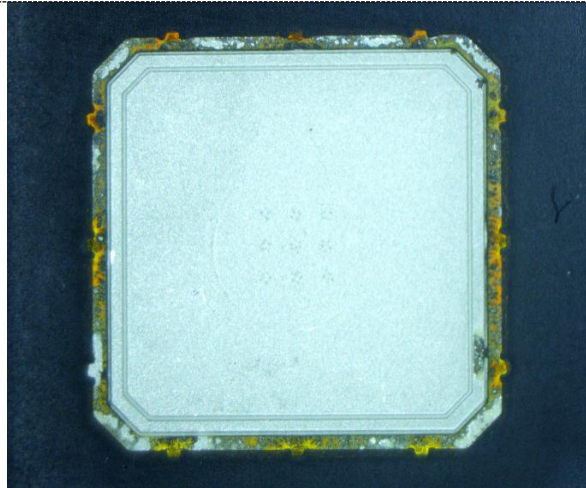
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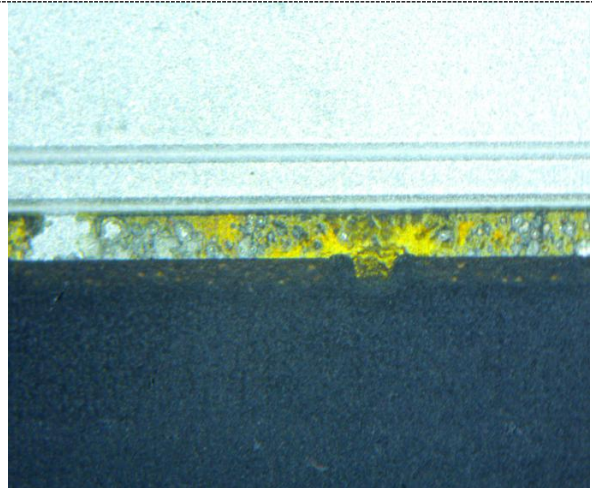


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#5-Before Sink View-1



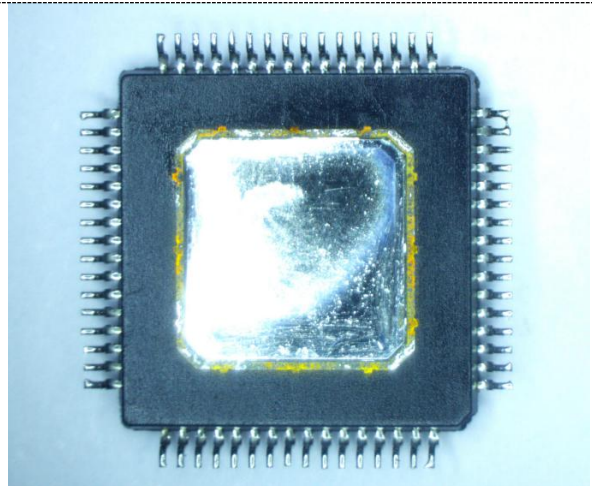
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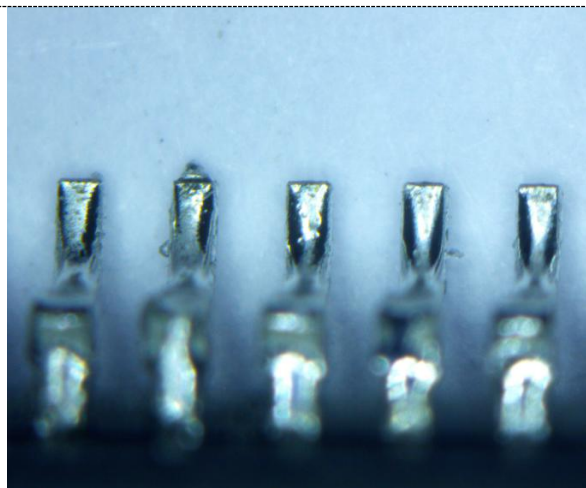
#5-After Top View



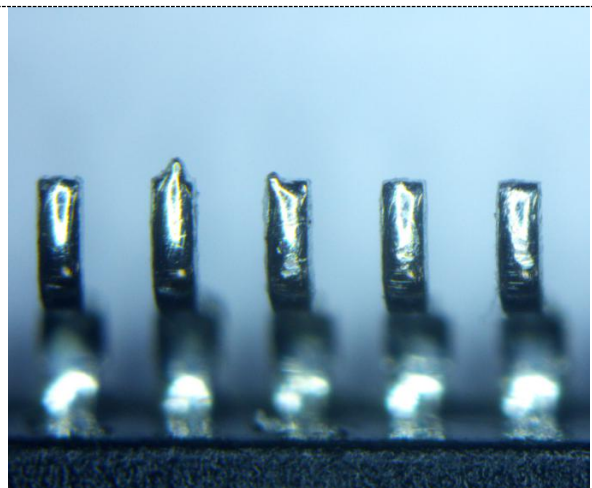
#5-After Bottom View



#5-After Top Leads



#5-After Bottom Leads





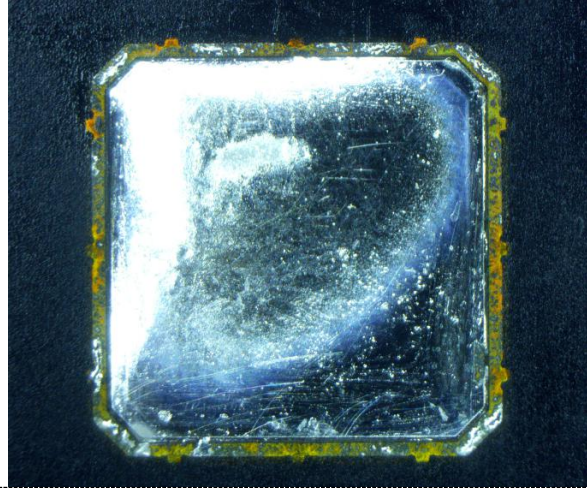
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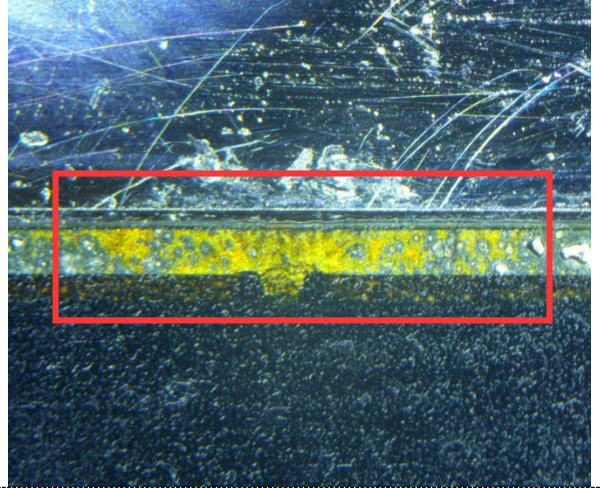


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#5-After Sink View-1



#5-After Sink View-2



END



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For more information, please visit: www.iclab-cn.com.

CXO Lab WeChat official account

