2019.07.03
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éolane

QUALITY ENGINEERING LAB
TEST REPORT

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1 Introduction

Table 1: Background information

Project, Customer, Tel. no.	*ERD, Anna*
Component/ unit type	*IC*
Component/unit code (Eolane/ Manuf.)	*ERDIOT-E00267/DC: 1706 (250pcs)*
Reason for the analysis	*To check the solderability for the old date code components*
Report number	*STR19240*
Work receiving date / expected work finishing date	*2019.07.02*
Report author /Date	*Suyue Zhu/ 2019.07.03*

2 Test description and method

2.1 Test description

Three pieces of old date code ICs (D/C 1706) were submitted to QE lab to do solderability test.

2.2 Test method

Refer to IPC J-STD-002E Test B1, the dip and look test shall be performed on the samples.
The test conditions are shown as follows

A) Composition of Solder: Sn96.5Ag3.0Cu0.5
B) Solder Temperature: 245℃
C) Dwell Time: 5 seconds
D) Immersion Rate: 25mm/s
E) Flux: 74.61%±0.5% by weight of isopropyl alcohol, 25%±0.5% by weight of colophony and 0.39%±0.01% by weight of diethylammonium hydrochloride

3 Observations

Dewetting was found for sample 1 and 3.

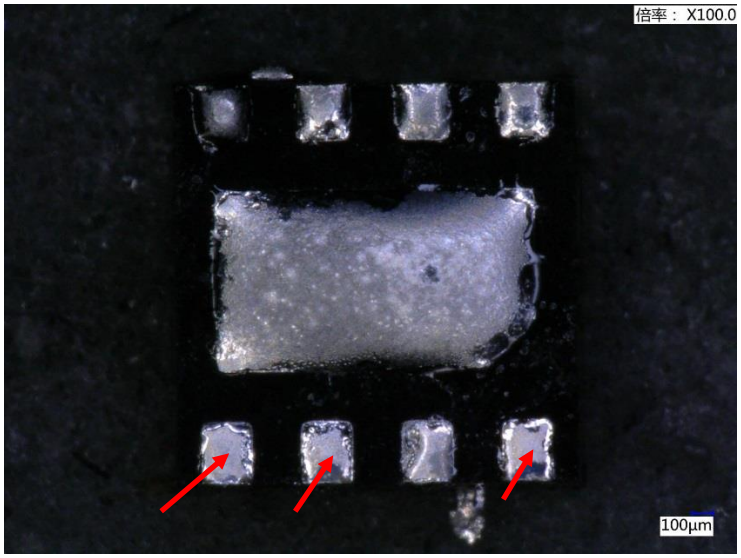

Fig.1: Representative view of sample 1 showing dewetting

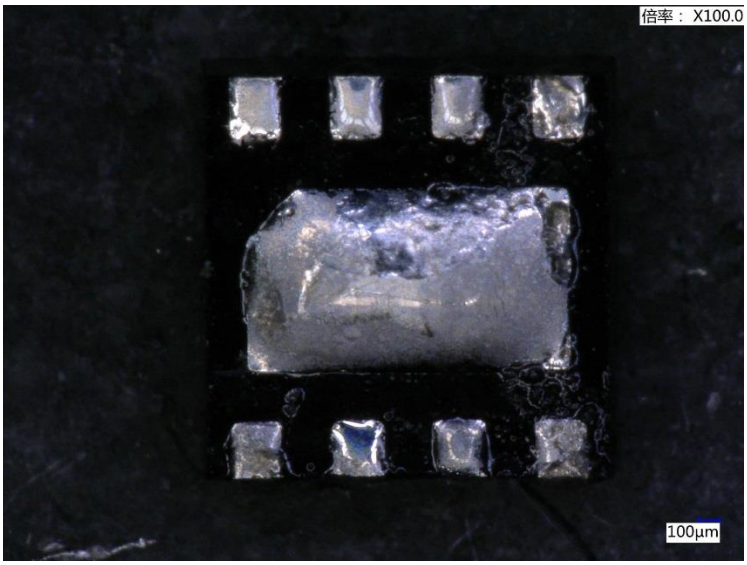

Fig.2: Representative view of sample 2

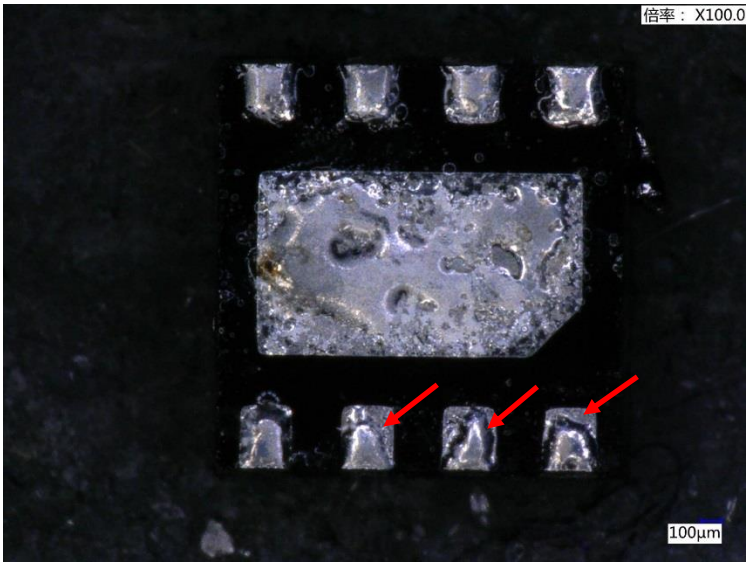

Fig.3: Representative view of sample 3 showing dewetting

4 Test Results

Table 2: Results of Solderability Test

Sample No.	Accept/Reject Criteria (Per IPC J-STD -002E Test B1)	Results Description	Conclusion	Photo
1	All termainations shall exhibit a continuous solder coating free from defects for a minimum of 95% of the critical area of any individual termination. Anomalies other than dewetting, nonwetting, and pin holes are not cause for rejection. Exposed terminal metal is allowable on surface mount components at the toe end and on the vertical surfaces that are either unplated or sheared during component fabrication	Dewetting (90%)	Fail	Fig.1
2		Good wetting (100%)	Pass	Fig.2
3		Dewetting (60%)	Fail	Fig.3

5 References

IPC J-STD-002E

6 Revision history

Version	Date	Drafted/Modified by	Status	Accepted by	Main changes
0.1	2019.07.03	Suyue Zhu	Approved	Colin Wang	