

Returned Material Analysis Report (Final)

D1) Use Team Approach :

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D2) Describe The Problem : Specify the problem by identifying in quantifiable terms the **who, what, where, why, how , how many** (5W2H) for the problem °

1. Product Information :

Returned Date : 2022/12/12QM Received Date : 2022/12/13QM Issued Date : 2022/12/21Customer : (弘憶)鴻海網通Part Number : RTL8211F-CGPackage Type : QFN-40

Customer's Model No. :

Lot No.	Sample No.
<u>M2CT9H1</u>	<u>#1</u>
<u>LB1UEH2</u>	<u>#2</u>

2. Problem Description :

Failure SymptomALT customer feedback that they found out 2pcs no boot, no HDMI signal output.Test Environment 24 °C**D3) Implement and Verify Containment Action :** Define and implement containment actions to isolate the effect of problem from any internal/external customer until corrective action is implement °-Lot History Check Result :After checking the lot history, no abnormality was found. We will perform FA first, then decide which actions should be taken.

<u>No</u>	<u>Item</u>	<u>Who</u>	<u>When</u>
<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>

D4) Define and Verify Root Causes : Identify all potential causes which could explain why the problem occurred ° Isolate and verify the root cause by testing each potential cause against the problem description and test data ° Identify alternative corrective actions to eliminate root cause °☒ QA verify ☒ Tester verify ☐ FAE verify ☐ Design verify ☐ SD verify-Electrical Analysis :

1) QA I-V Curve Measuring :

- Equipment : FB102 Curve Tracer
- Method : Forcing voltage into every pin with IC's GNDs are grounded to check I-V curve if any leakage current existed.
- Results : Please refer to attachment 1 and attachment 2.

2) Tester Verifying :

- Method : Run Test Program
- Results : Please refer to attachment 1.

- Physical Analysis :1) Decapsulation

- Definition : De-cap means removing the resin of sample to let IC be exposed that we could observe the IC from top view.
- Method : Use acid to etch the resin.
- Results : Decaping sample #2 burnout defect was found, please refer to attachment 3.

- Conclusion and Suggestion :

- 1) [ESD/EOS] [100%] All returned samples were damaged by ESD/EOS.

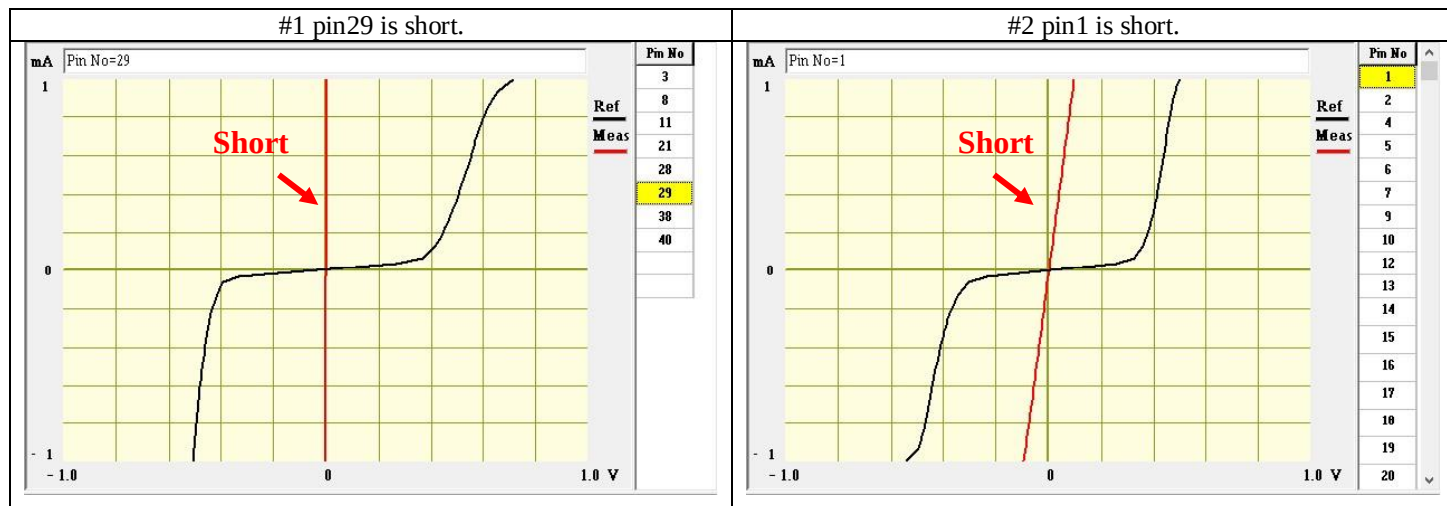
Suggestion :

- Please check the application environment if any abnormal condition existed.
- Please check if the failure samples were produced from the same production line or operator.

Attachment 1 、 Test Results

No.	IV curve	Tester Verify
#1	Short:3,8,9,11,29,30,40 Abnormal:10	o/s fail
#2	Short:1~3,8,10~12,21,28~30,40 Abnormal:9	o/s fail

Attachment 2 、 I-V Curves



Attachment 3 、 De-cap Photo