



Eight Discipline Report (8D Report)

To: 8D report No.: **CPCQ2000601**
From: **Chicony Power Technology** RMA claim No.: **N/A**
CC: **N/A** Chicony P/N: **A065RP25P-HW01-0A**
Customer P/N:
Submit date: **2020/06/24 updated** Product description: **65W adapter**
Receive date: **2020/06/01** Defect D/C or Lot No.: **2020/04**
Subject: **ESD Test Fail*1pcs**

D1.) 問題解決成員: Use Team Approach

主持者 (Team Leader): **Henry_Zhang**

內部成員 (Internal Team Members):

CQS	Sunny_Dang
MFG	Ice_Liu
IPQC/QE	BL_Zhang
PE	XP_Zhao
IE	Hunter_Liao
SQE	Yanlan_Qin

外部成員 (External Team Member):

N/A

D2.) 問題說明: Problem Description:

(Note: Use who, what, when, where, why, how, how many to specify the Customer's problem.)

2020/05/29, Q CQ 反饋我司 HP 65W adapter ESD test fail*1pcs.

CPT P/N: A065RP25P-HW01-0A

Defect S/N: WJEKF0AGCDL8EA

Defect D/C: 2020/04/09

D3.) 內部或客戶的暫時解決辦法及實施日期: Implement and Verify Containment Action:

(Note: Internal / external containment action effectiveness and date.)

1. CPT FAE 將 adapter 帶回廠內進一步分析.

Owner: FAE Date: 2020.06.01

D4.) 不良原因確認: Define and Verify Root Causes:

(Note: Identify and verify all suspect causes, which needs explain why the problem occurred.)

1. 生產記錄：

根據退回產品 S/N,查詢廠內 SFCS 記錄正常.

Travel Card

Customer SN

WJEKF0AGCDL8EA

Query

Export

Batch Exp

Work Order

MBK15403

Serial Number

MBK1540311644

Part No

A065RP25PHW010A

Customer SN

WJEKF0AGCDL8EA

Version

N/A

QC LotNo

QCCPCQ_L0420040956334

SPEC1

Pallet No

PMK0110100047

OutPut Time

2020/4/9 上午 09:23:40

Carton No

CMK1540300099

Status

Complete

Box No

N/A

Travel

Repair

Quality Control

KeyParts

Rework

Work Order

Current

Burn In

Work Order

Serial Number

Customer SN

Custd

Versid

Route Name

Terminal Name

Current Status

Work Flag

MBK15403

MBK1540311644

N/A

N/A

N/A

Assy-AutoLin

ICT03

Normal

Normal

MBK15403

MBK1540311644

N/A

N/A

N/A

Assy-AutoLin

ACT03

Normal

Normal

MBK15403

MBK1540311644

MJ24XXX13513

N/A

N/A

Assy-AutoLin

ASSY01

Normal

Normal

MBK15403

MBK1540311644

MJ24XXX13513

N/A

N/A

Assy-AutoLin

PRE-ATE01

Normal

Normal

MBK15403

MBK1540311644

MJ24XXX13513

N/A

N/A

Assy-AutoLin

SN CHECK02

Normal

Normal

MBK15403

MBK1540311644

MJ24XXX13513

N/A

N/A

Assy-AutoLin

HIPOT/GROUND

Normal

Normal

MBK15403

MBK1540311644

MJ24XXX13513

N/A

N/A

Assy-AutoLin

FINAL-ATE101

Normal

Normal

MBK15403

MBK1540311644

MJ24XXX13513

N/A

N/A

Assy-AutoLin

FINAL-ATE201

Normal

Normal

MBK15403

MBK1540311644

MJ24XXX13513

N/A

N/A

Assy-AutoLin

FINAL-ATE301

Normal

Normal

MBK15403

MBK1540311644

MJ24XXX13513

N/A

N/A

Assy-AutoLin

PACKING03

Normal

Normal

MBK15403

MBK1540311644

WJEKF0AGCDL8EA

N/A

N/A

Assy-AutoLin

QC01

Normal

Normal

2. 實物確認:

檢查 adapter 外觀無異常,通電測試確認產品無輸出(如下圖).



3. 不良分析:

3.1.開殼檢查確認零件面及錫面無異常;逐次量測錫面各個零件(如下圖).

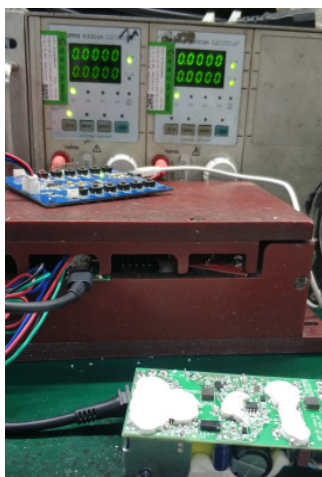


3.2.逐步排查不良 adapter 錫面各零件,懷疑 U1 Fail;進行交叉驗證,將良品 adapter 的 U1 取下,更換在不良 adapter,通電測試確認該 adapter 輸出無異常(如下圖).



不良 adapter+良品 adapter 的 U1

3.3.將被懷疑不良的 U1 裝回不良 adapter,通電測試確認該 adapter 無輸出(如下圖).初步確認不良 adapter 的 U1 Fail.



不良 adapter+不良 adapter 的 U1

4. 電路分析:

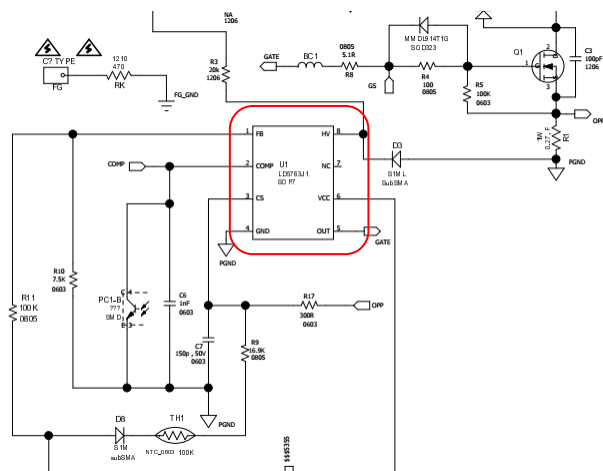
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U1 零件不良,導致產品無輸出.



綜合分析:U1 Fail 從而導致產品無輸出.

D5.)改善措施: improvement measure:

(Note: Be make sure the corrective actions is effective in process as well as able to fix the customer complaint problem)

1. 將不良零件送予廠商分析為 HV 內部第一級線路遭外部異常能量 EOS Damage.廠商分析報告如下:

料號:601022001522TSHF 廠商:LEADTREND



A20060006(T048
B2441)-LD5763J1

2. 廠內生產情況調查:

a.調查不良品所在工單(MBK15403)首件 ESD 測試結果 PASS.

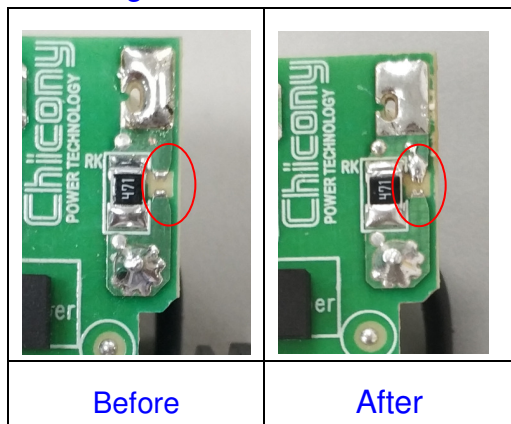
b.該 U1 在 L65505-002 機種截止 6/3 日使用了 34,952pcs.查詢廠內維修記錄,無不良.

3. 為了補強 adapter 的 ESD 放電能力,取良品 adapter,進行不同放電 pin 距離的驗證測試.

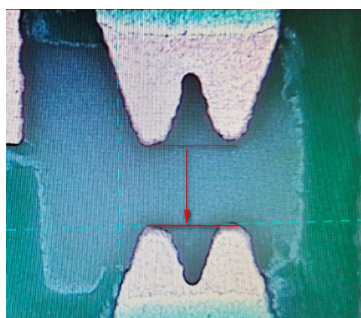
3.1.將 5pcs 良品 adapter,進行 ESD Air Discharge 測試.驗證結果如下:

條件	Result
20KV	1pc Fail
20.5KV	1pc Fail
21KV	3pc Fail

3.2.將 1pcs 良品 adapter,在 PCB 板上 RK 的銅箔尖點處,縮短放電 pin 距離,進行 ESD Air Discharge 測試.驗證到 25KV 產品 Pass.



4. RD study 縮短 PCB 板上 RK 的放電 pin 距離,由 0.5mm 縮短至 0.4mm.預計在 2020 年 7 月中旬導入 new PCB.



Owner:RD Due date:2020.07.15

D6.)改善措施實施日期:Implement Permanent Corrective Actions:

(Note: Be provide the phase-in date or lot# of corrective actions implementation in process)

2020.07.15

D7.)預防再發生措施:Prevent Recurrence:

(Note: Modified the management, operating systems, practices, and procedures to prevent recurrence for the problems as well as lessons learned cases.)

QIT members and IPQC will continue trace this issue day by day.

D8.)確認並感謝問題解決成員:Check and Congratulate the Team:

(Note: Recognize the collective efforts of the team.)

Thanks to all QIT members.



Signature Team Leader: Henry_Zhang

Name - Title

Signature by Approver: Roy_Tsai

Name-Title

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