

Eight Discipline Report (8D Report)

To: Customer
 From: : Chicony Power Technology
 CC : N/A
 8D report No.: CPCQ2000601
 RMA claim No.: N/A
 Chicony P/N: A065RP25P-HW01-0A
 Customer P/N:
 Submit date: 2020/06/24 updated
 Receive date: 2020/06/01
 Product description: 65W adapter
 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, Customer CQ 反饋我司 HP 65W adapter ESD test fail*1pcs.

Customer P/N: xxxx

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	

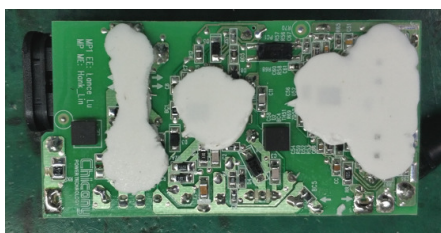
2. 實物確認:

檢查 adapter 外觀無異常,通電測試確認產品無輸出(如下圖).

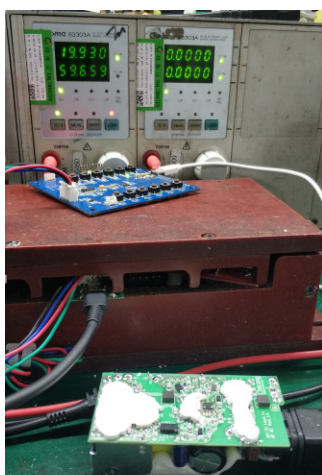


3. 不良分析:

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).

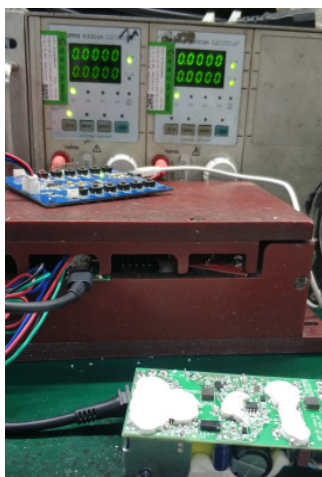


3.2.逐步排查不良 adapter 錫面各零件,懷疑 U1 Fail;進行交叉驗證,將良品 adapter 的 U1 取下,更換在不良 adapter,通電測試確認該 adapter 輸出無異常(如下圖).



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:

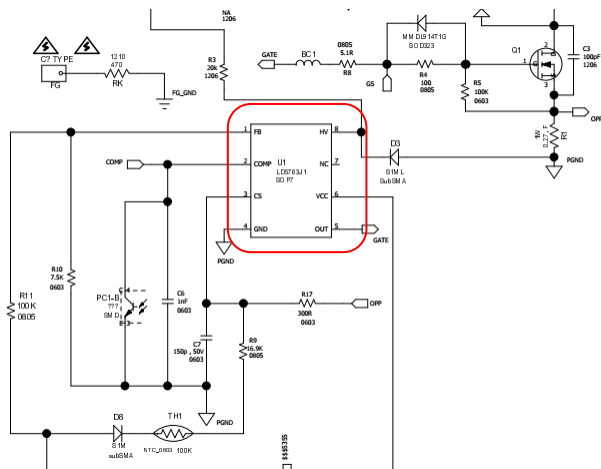
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U1 零件不良,導致產品無輸出.



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.

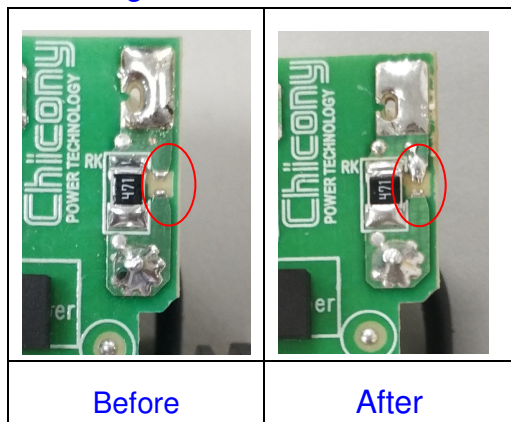
b.該 U1 在 xxxx 機種截止 6/3 日使用了 34,952pcs.查詢廠內維修記錄,無不良.

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.

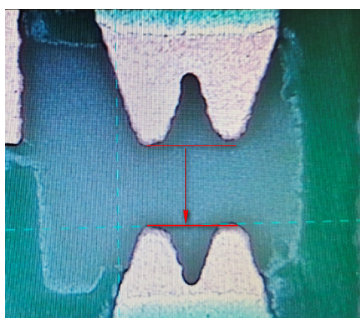
3.1.將 5pcs 良品 adapter,進行 ESD Air Discharge 測試.驗證結果如下:

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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