Eight Discipline Report (8D Report)

To:	8D report No.:
From:：	RMA claim No.:
CC：	Chicony Power P/N: **A140A001L-LG01**
	Customer P/N:
Submit date: **2018/01/23**	Product description:
Receive date: **2018/01/23**	
Subject：IC HV pin 電流過應力, [IC, 電阻]	

D1.) 問題解決成員:Use Team Approach

主持者 (Team Leader)：

內部成員 (Internal Team Members):

外部成員 (External Team Member):

D2.)問題說明:Problem Description:

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

Got the Sample on 1/23, Tested the new condition input voltage 400Vac at customer development, the PSU can not work after high input voltage 400Vac. the a defect rate of 33.3% (1/3EA).

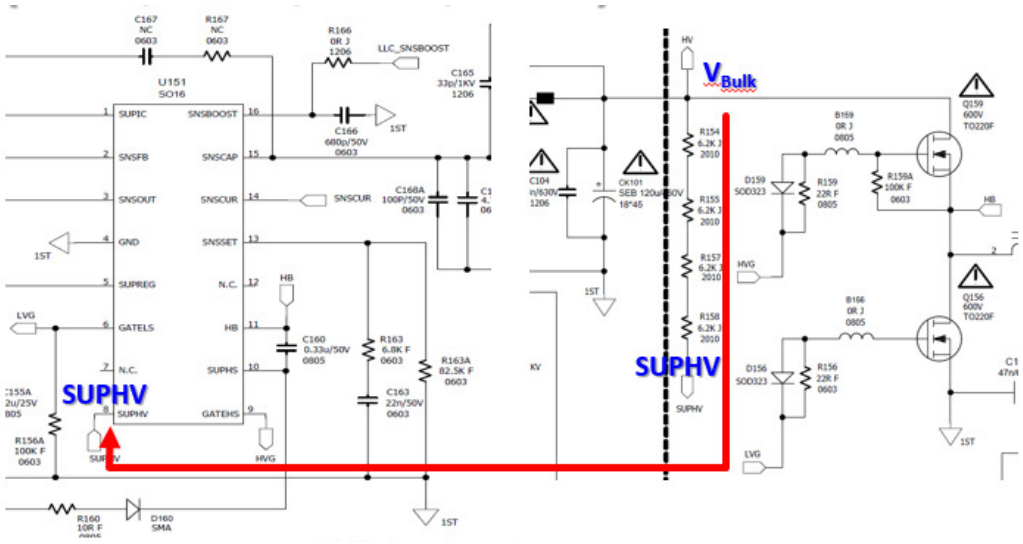
D3.)內部或客戶的暫時解決辦法及實施日期:Implement and Verify Containment Action:

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

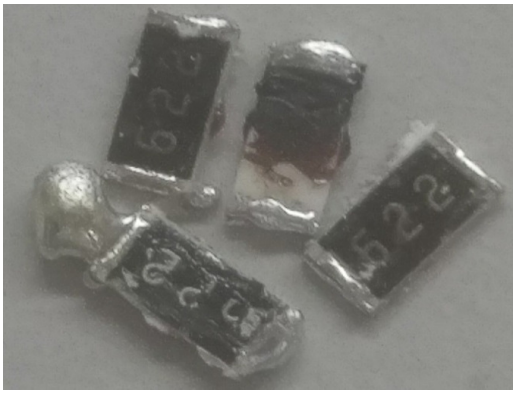
1. **FAE of CPT got this PSU from customer for further analysis.**
2. **CPT send 1pc PSU to customer for exchange.**

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.**)**



Took out the resisters (R154, R155, R157, R158) and measured resistances, they are in spec (6.2K±5%).



After change the LLC IC(U151) of the defect sample, the output voltage is normal operating.

Considering the SUPHV max current 20mA and VBulk voltage 565Vdc (400Vac), the ISUPHV is over the spec.

- **Before:**

$400V_{AC} * \sqrt{2} / (6.2K*0.95*4) =$

24.02mA > 20mA

According to new test condition, we recommend to modify the resistance (R154, R155, R157, R158) from 6.2K to 8.2K ohm.

- **After:**

$400V_{AC} * \sqrt{2} / (8.2K*0.95*4) =$

18.2mA < 20mA

8. Limiting values

Table 7. Limiting values

In accordance with the Absolute Maximum Rating System (IEC 60134).

Symbol	Parameter	Conditions	Min	Max	Unit
Currents					
I_{SUPHV}	current on pin SUPHV		-	20	mA

Test 5pcs pass

Vin = $400V_{AC}$ burn in 30min.

D5.)改善措施:Corrective Action Verification:

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

- **According to the new test condition, input voltage is 400Vac, we tested original samples 5pcs and modified samples 5pcs, they are passed.**
- **But considering the limited current 20mA, it will be a risk in the future.**
- **Therefore, we recommend to modify the resistances (R154, R155, R157, R158) from 6.2K ohm to 8.2K ohm.**

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**)**
immediately
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**.)**
R154, R155, R157, R158 change to 8.2K ohm, meet IC current limit.
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 you all！！！

Signature **Team Leader**:	
	Name – Title
Signature by Approver:	
	Name-Title