

## Eight Discipline Report (8D Report)

To: <b>Customer</b>	8D report No.:
From: : <b>Chicony Power Technology</b>	RMA claim No.: <b>N/A</b>
CC :	Chicony Power P/N: <b>W033R004H</b>
	Customer P/N:
Submit date: <b>2016/08/9</b>	Product description: <b>33W</b>
Receive date: <b>2016/08/5</b>	Defect D/C or Lot No.:
<b>Subject : Acoustic *2pc (transformer 中柱點膠偏差), ( EMC / acoustic / 零件 /磁件/ 點膠/Glue )</b>	
<b>D1.) 問題解決成員:Use Team Approach</b>	
主持者 (Team Leader) : <b>Mark_Meng</b> 內部成員 (Internal Team Members): <div style="text-align: center; margin-top: 10px;"> <b>CQS: Cecilia Sun</b>   <b>QE: Nono Chen</b>   <b>MFG: Wei Li</b>   <b>PE: Kefang Zheng</b>   <b>IE: Yansong Tong</b>   <b>RD: Aaron _ Chen,</b>   <b>Sales: MichaelFH_ Ning</b> </div> 外部成員 (External Team Member):	
<b>D2.)問題說明:Problem Description:</b>	
(Note: Use <b>who, what, when, where, why, how, how many</b> to specify the Customer's problem.)	
<b>2016/08/5 customer found one PSU (F185081624000958 and F185081626000364) that is singing @light load ~100mA.</b>	
<b>D3.)內部或客戶的暫時解決辦法及實施日期:Implement and Verify Containment Action:</b>	
(Note: Internal / external containment action effectiveness and date.)	
<b>1. Send this defect adapter to Chicony for analysis.</b>  <b>Date:2016/08/5</b>	
<b>D4.)不良原因確認: Define and Verify Root Causes:</b>	
(Note: Identify and verify all suspect causes, which needs explain why the problem occurred.)	
<b>1. Setup and test condition for the analysis</b>	

**Test condition:**

**AC input: 90V and 264V**

**Load condition: 0A to 2A by step of 0.1A**

**Microphone position: 30cm to upper center of power supply**

**Serial number: F185081624000958 and F185081626000364**

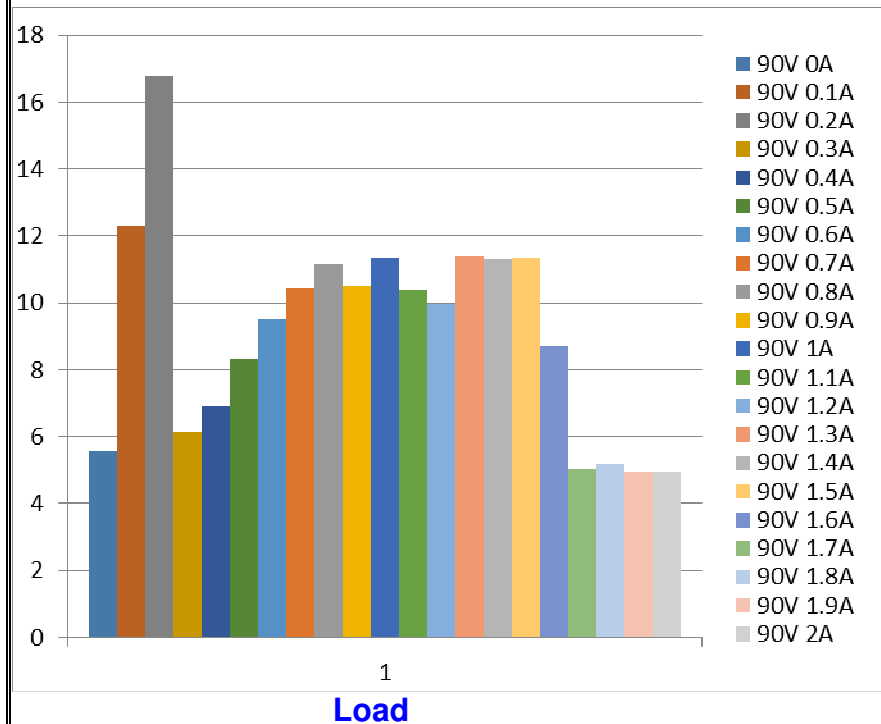


**2. We measured the acoustic noise of return unit F185081624000958.**

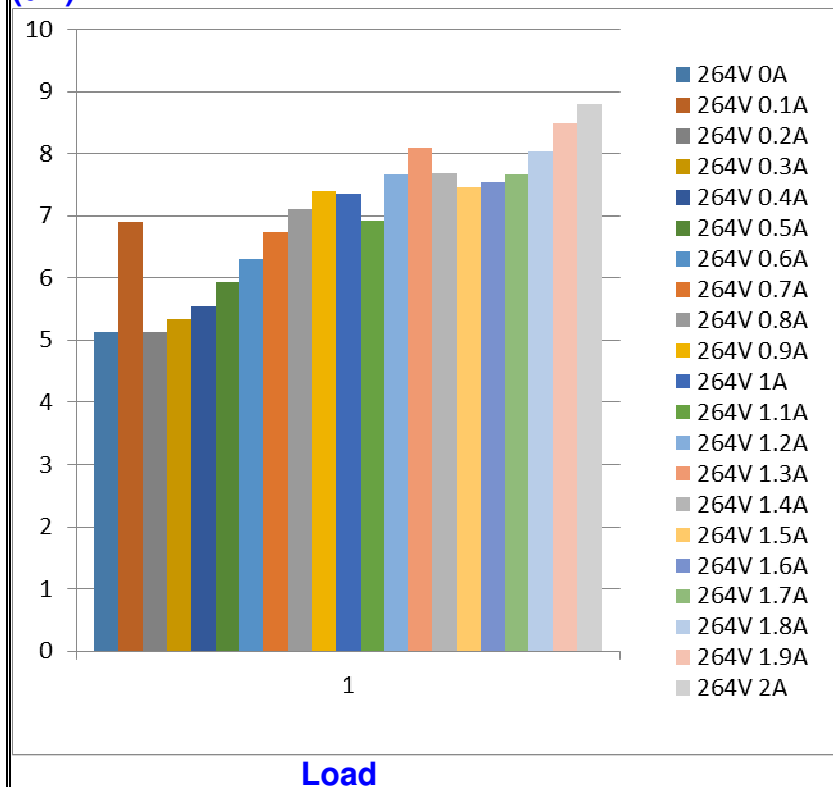
**Test result as below pictures-**

**The highest point is appeared at 100mA~200mA at input 90V, the noise level is between 12.31dB ~16.76dB**

### Noise level (dB)



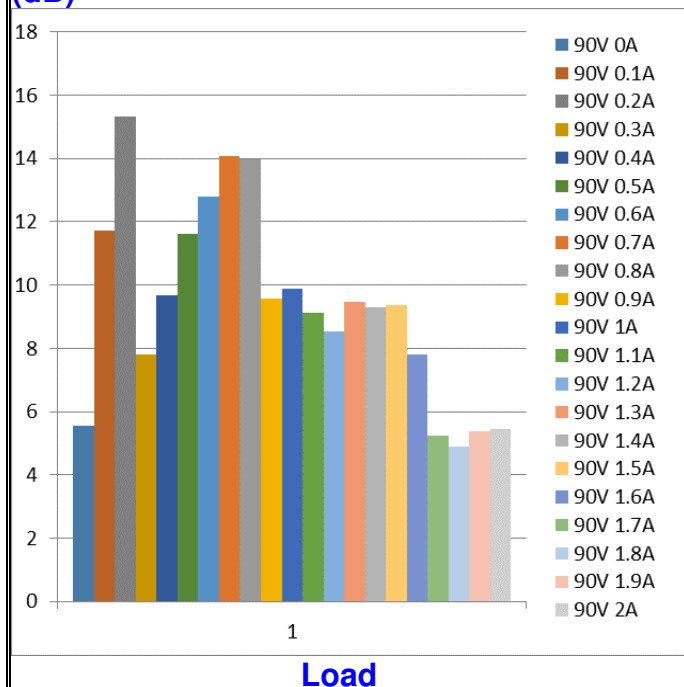
### Noise level (dB)



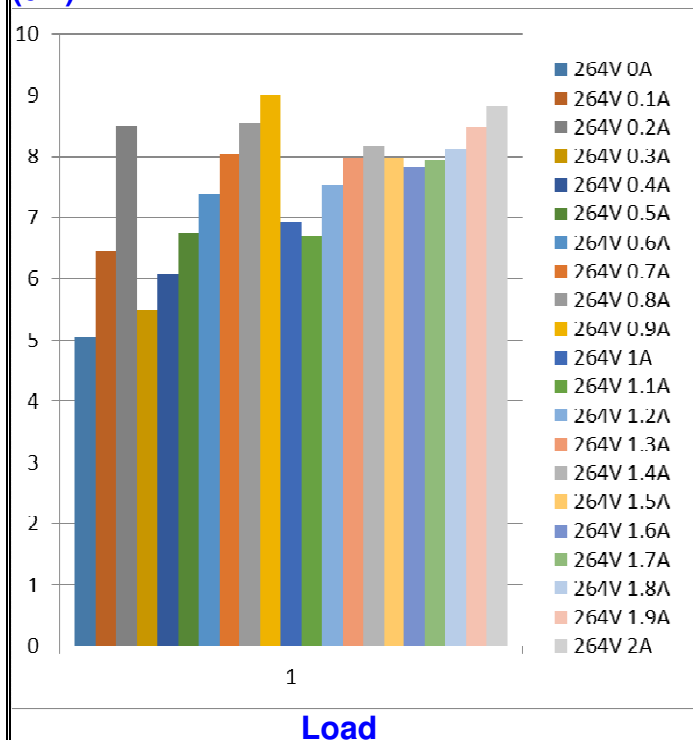
**3. We measured the acoustic noise of return unit F185081626000364.  
test result as below pictures-**

The highest point is appeared at load 100mA~800mA at input 90V, the noise level is between 11.63dB ~15.32dB.

### Noise level (dB)

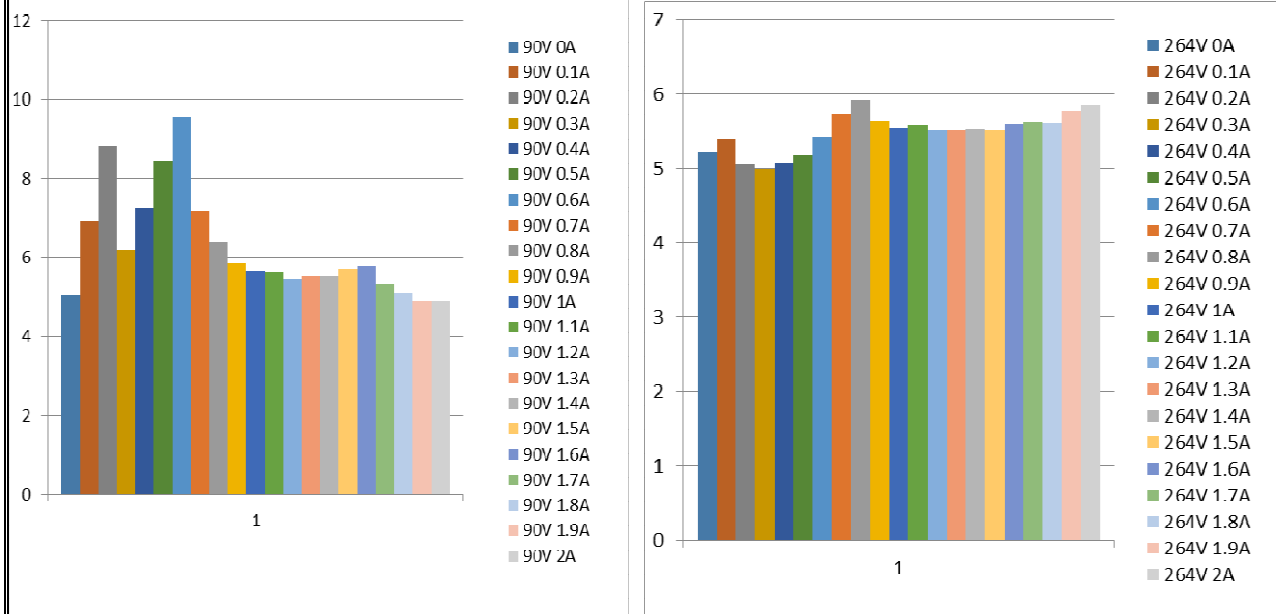


### Noise level (dB)



4. We measured the acoustic noise of EVT2 sample rev:01 67U0025D. This is good sample. Test result as below pictures-  
The test result is all under 10dB at 90V and 264V input.

#### Noise level (dB)

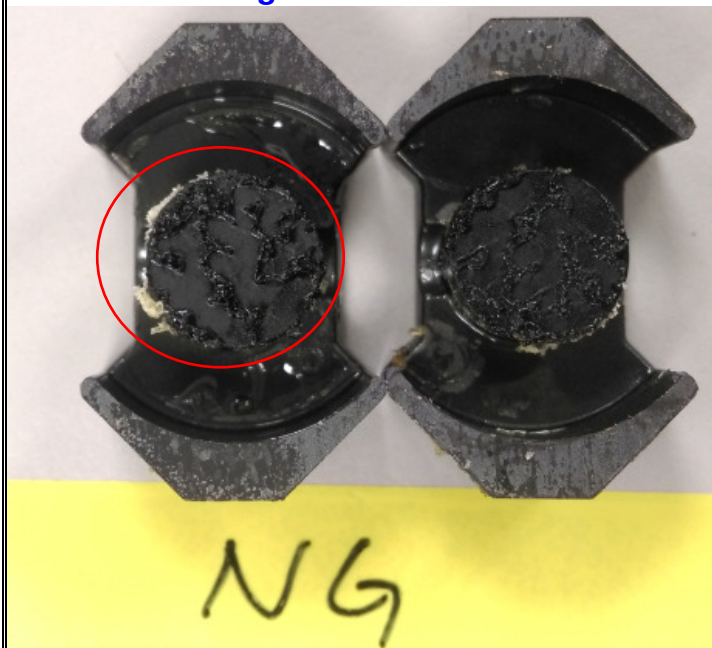


5. We interchanged components between returned unit and EVT 2 good unit, and identified the transformer is the component to cause the noise difference, Analysis of the transformer revealed that no enough glue applied at the center leg of the core is the root cause of the failure.

Good transformer with enough glue at Center leg of the core



**Return units transformer with no enough  
Glue at center leg of the core**



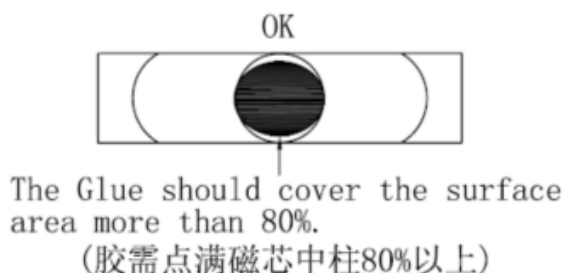
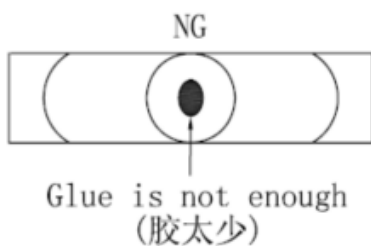
**D5.)改善措施:Corrective Action Verification:**

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

- 1. We defined the glue volume in the transformer specification which is must greater than 80% of the area of center leg as below picture. However, the transformer sample for trial run was made by hand and the glue volume control is not accurate.**

**NOTE 3. 點膠要求：**

磁芯中柱點軟膠需滿 80%以上，如下圖示



- 2. Automatic glue machine will be used from the up coming build to control the volume of glue.**

**Owner: Zhuoj**

**Due date:2016/08/12**

**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)

**Due date:2016/08/12**

**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.)

**CPT transformer team will use the automatic glue machine to control the values of glue in the future.**

**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.)

**CQS: Cecilia Sun      QE: Nono Chen      MFG: Wei Li      PE: Kefang Zheng**

**IE: Yansong Tong      RD: Aaron \_ Chen      Sales: MichaelFH\_ Ning**

<b>Signature</b>	<b>Cf_Liu</b>
<b>Team Leader:</b>	
	Name – Title
<b>Signature by Approver:</b>	<b>Roy_Tsai</b>
	Name-Title