

## Customer Complaint Analysis Report

Customer : 巨新科-磐鴻

Product Type : MLCC

Part No. : 0805X475K250CT

Lot No. : N/A

Sales No. : 0038SY-990255

File No. : DQM-100208

### Factory location:

- Yang Mei
- Kao Hsiung
- Da Lang
- Su Zhou

Q&R: Johnny Zhang

# WALSIN TECHNOLOGY CORPORATION

## 8D-Corrective Action Report

### Complete following for all applicable items:

Customer: 巨新科 Part No: 0805X475K250CT Lot No: N/A  
 Customer feedback date: 2010/2/1 Failure Quantity : 10pcs File No: DQM-100208  
 Receive doubtful sample date: 2010/2/1 Customer Provide: 4pcsPCB 板

**Customer feedback Failure Mode:** IR 不良

### DISCIPLINE1: Team members

1. Q&R: Johnny Zhang
2. Process Engineering: Panli Liu
3. Sales: Daiwei Tian

### DISCIPLINE2: Problem Description

1. 客戶“巨新科”抱怨 WTC 出貨之 0805X475K250CT 產品在其客戶端使用時發現 Chip 有 IR 不良現象.
2. 客戶反饋此 Chip 的使用量為 9pcs/PCB，總投產 30000pcs，目前發現 10pcs 此不良，換算不良率約為 300PPM，不良位置均固定為機種之“CM28”位置.
3. 客戶提供焊於 PCB 板上樣品 4pcs 供 WTC 分析.

Occurred Point: Incoming Insp In-Process Stocks Customer Others

Date : 2010/2/3

### DISCIPLINE3: Containment Action

N/A

Person in charge Johnny Zhang Date : 2010/2/3

Dept. Manager Date :

### DISCIPLINE4: Failure Mode Analysis

對客戶提供已使用樣品進行分析：

1. 外觀檢查（於 PCB 板上），結果顯示 Chip 外觀正常，如 Fig 1~ Fig4 所示：

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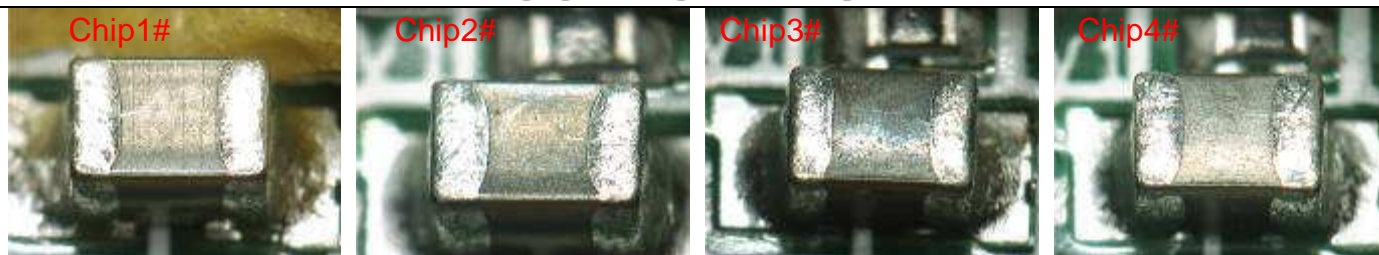


Fig 1

Fig 2

Fig 3

Fig 4

2. 外觀檢查（為避免傷害 Chip，用熱風槍將 Chip 取下），結果顯示 Chip1#、Chip2#外觀正常，Chip3#、Chip4#本體疑似有 Thermal Crack 現象，如 Fig 5~ Fig8 所示：

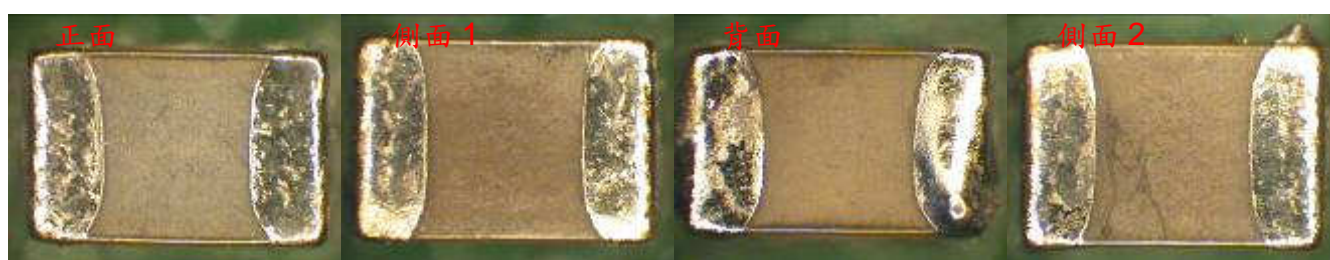


Fig 5 (Chip1#)

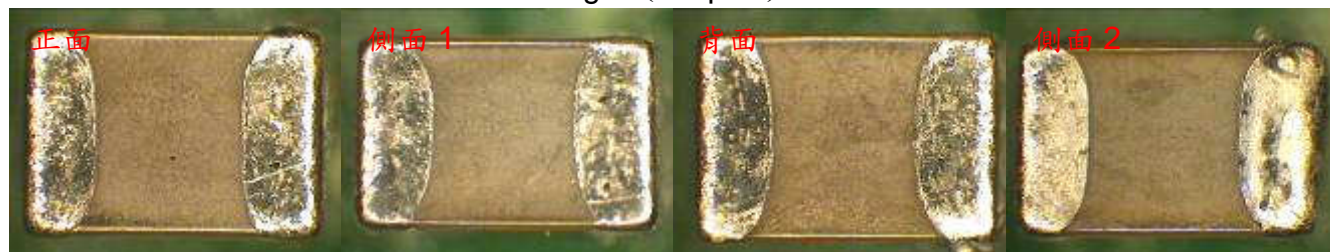


Fig 6 (Chip2#)

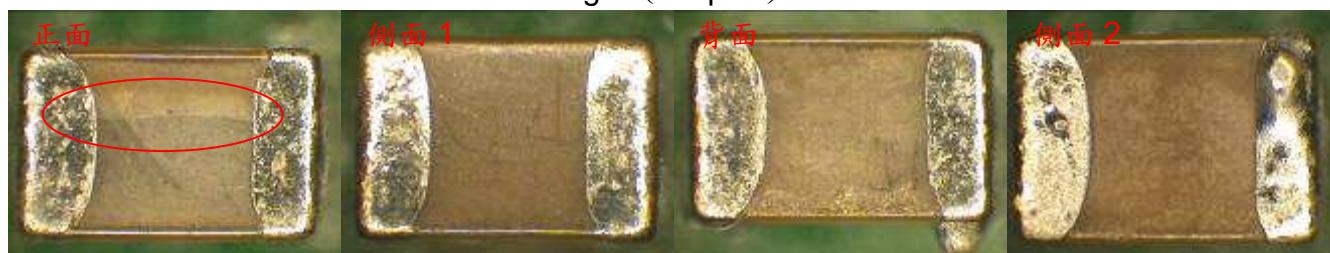


Fig 7 (Chip3#)

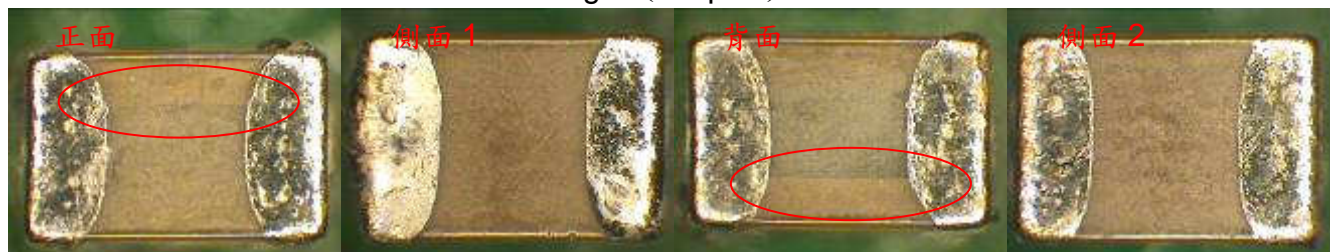


Fig 8 (Chip4#)

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3. 電性量測：結果顯示 Chip 的 Cap、DF、IR 值均超出 Spec 範圍，如表一所示

Item	Cap (uF)	DF (%)	IR (MΩ)
1#	5.34	94.58	57.76
2#	5.31	89.43	52.39
3#	5.35	88.23	Open
4#	5.19	86.15	Open
Spec	4.23 ~ 5.17	≤ 10	≥ 106.38MΩ
Meter	Agilent - 4288A		Agilent - 4339B

表一

4. DPA 分析，結果顯示 Chip1#~ Chip 4#內部均存在疑似受機械應力造成之 Crack 現象，且 Chip3#、Chip4#內部存在疑似因熱應力造成之 Thermal crack 現象，如 Fig 9~ Fig12 所示：



Fig 9 ( Chip1#)

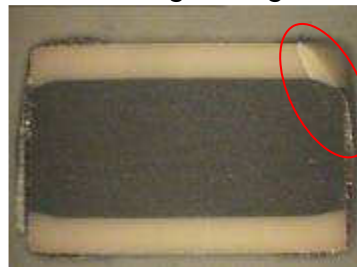


Fig 10 ( Chip1#)

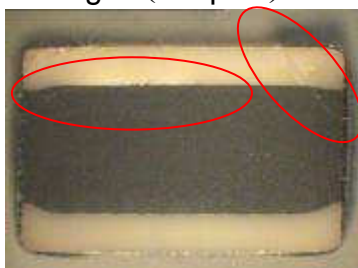


Fig 11 ( Chip1#)

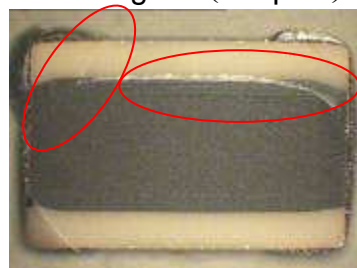


Fig 12 ( Chip1#)

5. 結論：

外觀檢查結果顯示 Chip1#、Chip2#外觀正常，Chip3#、Chip4#本體疑似有 Thermal Crack，電性量測結果顯示 Chip 的 Cap、DF、IR 值有超 Spec 現象，DPA 分析顯示 Chip1#~ Chip 4#內部均存在疑似受機械應力造成之 Bending Crack 現象，且 Chip3#、Chip4#內部存在疑似因熱應力造成之 Thermal crack 現象。

Person in charge Johnny Zhang

Date : 2010/2/3

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### DISCIPLINE5: Root Cause analysis

1. 依據以上分析可知，Chip 內部存在機械應力產生之 Crack 及因熱應力造成之 Thermal crack 是造成產品失效的根本原因。

Person in charge Johnny Zhang Date : 2010/2/3

Dept. Manager Jar Wu Date : 2010/2/3

### DISCIPLINE6: Permanent Corrective Action

N/A

Person in charge Date :

Dept. Manager Date :

### DISCIPLINE7: Customer Feedback & Comment

- : Comments on failure analysis report.
- : Visiting to customer is needed.
- : Additional analysis is needed such as \_\_\_\_\_

Please advise us earliest within 7 days for further improvement from our side.

Contact window : Johnny Zhang

Fax : 0769-83115187

### DISCIPLINE8: Corrective Action Confirmation

- Un-justify: Not need to confirm
- Justify: To confirm the effect of corrective action based on quality conference:

Link to QC-Story No. \_\_\_\_\_

Traceability: 2 weeks 1 month 3 months 6 months

\* The judgment must base on the results of at least 3 trial run lots.

Detail item:



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Person in charge		Date :	
<b>Approved By</b>    Date: 2010/2/3	<b>Approved By</b>  /  Date:		
<b>Approved By</b>  /  Date:	<b>Provided By</b>  <b>Johnny Zhang</b>  Date: 2010/2/3		

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