

## Product / Process Change Notification JLIO-7MCTR5

The information below reflects a change that is being implemented.

Notice Date: 03/11/2009

Product Category: Battery Management; Linear Devices; Mixed Signal Devices; Power Management; Thermal Management; PIC12xxx

Notification Subject: CCB#869: QUALIFICATION OF 8L & 10L MSOP WITH 8200T EPOXY AND G600 MOLD COMPOUND AT UTL ASSEMBLY

Notification Body:

PCN Status:  
Final Notification

Microchip Part#s Affected (please see the link for these files at the end of this PCN):

CCB#869\_Microchip Catalog Part#s Affected.xls  
CCB#869\_Microchip Catalog Part#s Affected.pdf

Description of Change:  
Change to die attach and mold compound bill of materials.

Pre-Change:  
Mold compound: KMC 184-7  
Die attach epoxy: 84-1LMISR4

Post-Change:  
Mold compound: G600  
Die attach epoxy: 8200T

Impacts to Data Sheet:  
None

Reason for Change:  
To improve manufacturability

Change Implementation Status:  
In progress

Estimated Change Implementation Date(s):  
March 20, 2009 (Date Code: 0911)

NOTE: Please be advised that during a transition period you may receive parts with either bill of materials, due to existing inventory of the original bill of materials.

Markings to Distinguish Revised From Unrevised Devices: (e.g.: Date Code, Device Marking, Ship Container Marking)  
Traceability code

Attachment(s):



**MICROCHIP**

**QUALIFICATION REPORT  
RELIABILITY LABORATORY**

**Q08173  
CCB#: 869  
PCN#: JLIO-7MCTE5**

**Date  
February 27, 2009**

**Qualification of Molding Compound and Epoxy in 8L MSOP & 10L MSOP  
Package with G600 molding compound and 8200T epoxy at UTL (NSEB)  
assembly site.**

**Distribution**

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## MICROCHIP PACKAGE QUALIFICATION REPORT

<b>Purpose</b>	To qualify G600 compound and 8200T Epoxy in 8L MSOP & 10L MSOP packages at UTL (NSEB) assembly site.
<b>CN</b>	BC082701
<b>QUAL ID</b>	Q08173
<b>MP CODE</b>	GBBA1BE3XPI0
<b>Part No.</b>	TC1303B-PI0EUN
<b>Bonding No.</b>	A-030773 Rev. B
<b><u>Package</u></b>	
<b>Type</b>	10L MSOP
<b>Package size</b>	3x3 mm
<b>Die thickness</b>	8 mils
<b>Die size</b>	63.00 x 83.60 mils
<b><u>Lead Frame</u></b>	
<b>Paddle size</b>	82 x 94 mils
<b>Material</b>	C7025 / Possehl (Hongkong)
<b>Surface</b>	Ag spot plating
<b>Process</b>	Stamped
<b>Lead Lock</b>	Yes
<b>Part Number</b>	FM0009
<b><u>Die attach material</u></b>	
<b>Epoxy</b>	8200T / Ablestik (USA)
<b>Conductive</b>	Yes
<b><u>Wire</u></b>	Au wire Tanaka (Malaysia)
<b><u>Mold Compound</u></b>	G600 / Sumitomo (Singapore)



# MICROCHIP PACKAGE QUALIFICATION REPORT

## Manufacturing Information

Assebly Lot No.	Wafer Lot No.	Trace Code
NSEB093200039	TMPE206048136.111	0845SY4
NSEB093200040	TMPE206048136.111	0845SYC
NSEB093200041	TMPE206048136.111	0845SYE

### Result

Pass  Fail  \_\_\_\_\_

10L MSOP BOM assembled by UTL (NSEB) pass reliability test per QCI-39000. This package was qualified to the Moisture/Reflow Sensitivity Classification Level 1 at 260°C reflow temperature per IPC/JEDEC J-STD-020C standard.

Prepared By: Thinnapol N. Date: February 27, 2009 (Reliability Engineer)

Approved By: Surasit P. Date: February 27, 2009 (Reliability Manager)

# PACKAGE QUALIFICATION REPORT

Qual Report : Q08173

Test Number (Reference)	Test Condition	Microchip Spec	Qty. (Acc.)	Date in	Date Out	Def/SS.	Result	Remarks
<b><u>MSL</u></b>								
MSL Level 1/260°C	85°C/ 85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH  3x Convection-Reflow 260°C max System: HELLER (1808 EXL)  ( IPC/JEDEC J-STD-020C )	S12/14/16  (PDC)	135	12/09/08	12/20/08	0/135	Pass	
<b><u>Precondition</u></b>								
Electrical Test	Electrical Test :+25°C and 85°C System: TTS1000	S12/14/16  (PDC)	693(0)	11/21/08	12/02/08	693		Good Devices
Bake	Bake 150°C, 24 hrs System: CHINEE	PI-92014B		12/11/08	12/13/08	693		
Moisture Soak	85°C/85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH	PI-91173B		12/13/08	12/20/08	693		
Convection-Reflow	3x Convection-Reflow 260°C max System: HELLER (1808 EXL)	PI-91160B		12/20/08	12/20/08	693		
Electrical Test	Electrical Test :+25°C and 85°C System: TTS1000	S12/14/16  (PDC)		12/20/08	01/08/09	0/693	Pass	

# PACKAGE QUALIFICATION REPORT

Qual Report : Q08173

Test Number (Reference)	Test Condition	Microchip Spec	Qty. (Acc.)	Date in	Date Out	Def/SS.	Result	Remarks
<b>Temp Cycle</b>	<b>Stress Condition:</b> -65°C to +150°C, 500 Cycles System : TABAI ESPEC TSA-70H Inspection: External crack inspection all units under 40X Optical magnification	PI-91020B		01/09/09	01/22/09	231		Parts had been pre-conditioned at 260°C
		QCI-33003	30(0)	01/22/09	01/22/09	0/30		
	<b>Electrical Test:</b> +85°C System: TTS1000	S12/14/16 (PDC)	231(0)	01/22/09	01/23/09	0/231	Pass	77 units / lot
	<b>Bond Strength:</b> Bond Shear (21.10 grams) Wire Pull (> 3 grams)	QCI-91022	15 (0)	01/23/09	01/23/09	0/15	Pass	
			15 (0)	01/23/09	01/23/09	0/15	Pass	
<b>Pressure Cooker</b>	<b>Stress Condition:</b> +121°C, 100% RH, 15 PSI, 96 hrs. System: TABAI ESPEC TPC-421	PI-92013B		01/12/09	01/17/09	231		Parts had been pre-conditioned at 260°C
	<b>Electrical Test:</b> +25°C System: TTS1000	S12/14/16 (PDC)	231(0)	01/17/09	01/19/09	0/231	Pass	77 units / lot

# PACKAGE QUALIFICATION REPORT

Qual Report : Q08173

Test Number (Reference)	Test Condition	Microchip Spec	Qty. (Acc.)	Date in	Date Out	Def/SS.	Result	Remarks
<b>HAST</b>	<b>Stress Condition:</b> +130°C/85%RH, 96 hrs. System: HAST 6000X	PI-92010B		01/17/09	01/22/09	231		Parts had been pre-conditioned at 260°C
	<b>Electrical Test:</b> +25°C and 85°C System: TTS1000	S12/14/16 (PDC)	231(0)	01/22/09	01/22/09	0/231	Pass	77 units / lot
<b>Solderability</b>  <b>Temp 245°C</b>	<b>Steam Aging:</b> Temp 93°C, 8Hrs System: SAS-3000 Solder Dipping: Solder Temp. 245°C Solder material: Pb Free Sn 95.5Ag3.9 Cu0.6 System: ERSA RA 2200D Visual Inspection: External Visual Inspection	QCI-31003	22 (0)	01/10/09	01/10/09	22		
				01/10/09	01/10/09	22		
				01/10/09	01/10/09	0/22	Pass	
<b>Bond Strength</b>  <b>Data Assembly</b>	Bond Shear (21.10 grams)	QCI-91022	30 (0) bonds	-	-	0/30	Pass	
	Wire Pull (> 4 grams)		30 (0) wires	-	-	0/30	Pass	

Active CATALOG_PART_NBR
MCP1252-33X50I/MS
MCP1252-ADJI/MS
MCP1252T-33X50I/MS
MCP1252T-ADJI/MS
MCP1253-33X50I/MS
MCP1253-ADJI/MS
MCP1253T-33X50I/MS
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TC1300R-2.8VUATRAAA
TC1300R-3.0VUA
TC1300R-3.3VUA
TC1300R-3.3VUATR
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