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Product Change Notification - LIAL-22MHLM308

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Date:	03 Apr 2018
Product	8-bit PIC Microcontrollers
Category:	
Affected CPNs:	
Notification subject:	CCB 3313, 3313.001 Initial Notice: Qualification of MMT as a new assembly site for selected Atmel products of 56.8k technology available in 44L and 28L PLCC packages
Notification text:	PCN Status: Initial notification.

PCN Type:
Manufacturing Change

Microchip Parts Affected:
Please open one of the icons found in the Affected CPNs section above.

NOTE: For your convenience Microchip includes identical files in two formats (.pdf and .xls).

Description of Change:
Qualification of MMT as a new assembly site for selected Atmel products of 56.8k wafer technology available in 44L and 28L PLCC packages.

Pre Change:
Assembled in ANAP using Au wire, CRM-1076E die attach and C194 lead frame material or assembled in LPI using Au or CuPdAu wire, CRM-1033BF die attach and C151 lead frame material.

Post Change:
Assembled in MMT using 3280 die attach and C151 lead frame material

Pre and Post Change Summary:

	Pre Change		Post Change
Assembly Site	Amkor Technology Philippine (P1/P2), INC. (ANAP)	Lingsen Precision Industires, LTD. (LPI)	Microchip Technology Thailand (Branch) (MMT)
Wire material	Au	Au	Au
Die attach material	CRM-1076E	CRM-1033BF	3280
Molding compound material	G600	G600	G600
Lead frame material	C194	C151	C151

Impacts to Data Sheet:

None

Change Impact:

None

Reason for Change:

To improve on-time delivery performance by qualifying MMT as a new assembly site

Change Implementation Status:

In Progress

Estimated Qualification Completion Date:

April 2018

Note: Please be advised the qualification completion times may be extended because of unforeseen business conditions however implementation will not occur until after qualification has completed and a final PCN has been issued. The final PCN will include the qualification report and estimated first ship date. Also note that after the estimated first ship date guided in the final PCN customers may receive pre and post change parts.

Time Table Summary:

	April 2018				
Workweek	14	15	16	17	18
Initial PCN Issue Date	X				

Qual Report Availability				X	
Final PCN Issue Date				X	

Method to Identify Change:

Traceability code

Qualification Plan:

Please open the attachments included with this PCN labeled as PCN_#_Qual Plan.

Revision History:**April 03, 2018:** Issued initial notification.

The change described in this PCN does not alter Microchip's current regulatory compliance regarding the material content of the applicable products.

Attachment(s): [PCN_LIAL-22MHLM308_QUAL_PLAN.pdf](#)

Please contact your local [Microchip sales office](#) with questions or concerns regarding this notification.

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QUALIFICATION PLAN SUMMARY

PCN #: LIAL-22MHLM308

Date

March 08, 2018

Qualification of MMT as a new assembly site for selected Atmel products of 56.8k wafer technology available in 44L PLCC package. The selected products available in 28L PLCC package will qualify by similarity (QBS).

Purpose: Qualification of MMT as a new assembly site for selected Atmel products of 56.8k wafer technology available in 44L PLCC package. The selected products available in 28L PLCC package will qualify by similarity (QBS).

CCB No.: 3313 and 3313.001

		Qualification Report
<u>Misc.</u>	Assembly site	MMT
	BD Number	BDM-001730 rev. A
	MP Code (MPC)	568TL7T2XC01
	Part Number (CPN)	AT89C51AC3-SLSUM
<u>Lead-Frame</u>	Paddle size	230x230
	Material	CDA151
	Surface	Ag Spot plated
	Treatment	None
	Process	Stamped
	Lead-lock	No
	Part Number	10104409
	Lead Plating	Matte Tin
<u>Bond Wire</u>	Material	Au
<u>Die Attach</u>	Part Number	3280
	Conductive	Yes
<u>MC</u>	Part Number	G600V
<u>PKG</u>	PKG Type	PLCC
	Pin/Ball Count	44
<u>Die</u>	Die Thickness	15 mils
	Die Size	178.0x124.0 mils
	Fab Process (site)	56.8K/MCSO

Test Name	Conditions	Sample Size	Min. Qty of Spares per Lot (should be properly marked)	Qty of Lots	Total Units	Fail Accept Qty	Est. Dur. Days	Test Site	Special-Instructions
Wire Bond Pull - WBP	Mil. Std. 883-2011	5	0	3	15	0 fails after TC	5	MMT/MTAI	30 bonds from a minimum of 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	5	0	3	15	0	5	MMT/MTAI	30 bonds from a minimum of 5 devices.
Wire Sweep		5	0	3	15	0		MMT	Required for any reduction in wire bond thickness.
External Visual	Mil. Std. 883-2009/2010	All devices prior to submission for qualification testing	0	3	ALL	0	5	MTAI	
HTSL (High Temp Storage Life)	+175 C for 504 hours. Electrical test pre and post stress at +25°C and hot temp.85°C. 1 lot to be tested at 125C	45	5	1	50	0	25	MTAI	
Preconditioning - Required for surface mount devices	+150°C Bake for 24 hours, moisture loading requirements per MSL level + 3X reflow at peak reflow temperature per Jedec-STD-020D for package type; Electrical test pre and post stress at +25°C. MSL1 @ 245°C	231	15	3	738	0	15	MTAI	Spares should be properly identified. .
HAST	+130°C/85% RH for 96 hours. Electrical test pre and post stress at +25°C and hot temp. 1 lot to be tested at 85C	77	5	3	246	0	10	MTAI	Spares should be properly identified.
Unbiased HAST	+130°C/85% RH for 96 hrs. Electrical test pre and post stress at +25°C.	77	5	3	246	0	10	MTAI	Spares should be properly identified.
Temp Cycle	-65°C to +150°C for 500 cycles. Electrical test pre and post stress at hot temp; 3 gram force WBP, on 5 devices from 1 lot, test following Temp Cycle stress. 1 lot to be tested at 85C	77	5	3	246	0	15	MTAI	Spares should be properly identified.

LIAL-22MH 3313.001 Initial Notice: Qualification of MMT as a new assembly site for selected Atmel pro

Affected Catalog Part Numbers(CPN)

AT80C51RD2-SLRUM
AT80C51RD2-SLSUM
AT89C5115-SISUM
AT89C51AC2-SLSUM
AT89C51AC3-SLSUM
AT89C51CC01CA-SLSUM
AT89C51CC01UA-SLSUM
AT89C51CC02CA-SISUM
AT89C51CC02UA-SISUM
AT89C51CC03CA-SLRUM
AT89C51CC03CA-SLSUM
AT89C51CC03UA-SLSUM
AT89C51ED2-SLRUM
AT89C51ED2-SLSUM
AT89C51IC2-SLRUL
AT89C51IC2-SLRUM
AT89C51IC2-SLSUL
AT89C51IC2-SLSUM
AT89C51ID2-SLRUM
AT89C51ID2-SLSUM
AT89C51RB2-SLRUL
AT89C51RB2-SLRUM
AT89C51RB2-SLSUL
AT89C51RB2-SLSUM
AT89C51RC2EDR-SLRUM
AT89C51RC2-SLRUL
AT89C51RC2-SLRUM
AT89C51RC2-SLSUL
AT89C51RC2-SLSUM
AT89C51RD2-SLRUM
AT89C51RD2-SLSUM
AT89C51RD2-SLSUMA0

Products of 56.8k technology available in 44L and 28L PLCC packages