

**Product Change Notification - KSRA-23FDQF538**

**Date:** 12 Feb 2018  
**Product Category:** Memory; 8-bit PIC Microcontrollers; Simple and Complex Programmable Logic  
**Notification subject:** CCB 3156, 3156.001, 3166 and 3166.001 Final Notice: Qualification of MMT as a new assembly site for selected Atmel products available in 8L, 20L and 40L PDIP packages.

**Notification text:**

**PCN Status:**  
Final notification

**Microchip Parts Affected:**

Please open the attachments found in the attachments field below labeled as PCN\_#\_Affected\_CPN.

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 available in 8L, 20L and 40L PDIP packages.

**Pre Change:**

Assembled at ANAP Assembly site using 8390A die attach material, and CK5000A molding compound material

**Post Change:**

Assembled at MMT Assembly site using CRM-1064L die attach material, and GE800 molding compound material

**Pre and Post Change Summary:**

	<b>Pre Change</b>	<b>Post Change</b>
<b>Assembly Site</b>	Amkor Technology Philippine Inc. (ANAP)	Microchip Technology Thailand Branch (MMT)
<b>Wire material</b>	Au Wire	Au Wire
<b>Die attach material</b>	8390A	CRM-1064L
<b>Molding compound material</b>	CK5000A	GE800
<b>Lead frame material</b>	C194	C194

**Impacts to Data Sheet:**

None

**Change Impact:**

None

**Reason for Change:**

To improve manufacturability by qualifying MMT as a new assembly site.

**Change Implementation Status:**

In Progress

**Estimated First Ship Date:**

December 15, 2017 (datecode: 1750)

NOTE: Please be advised that after the estimated first ship date customers may receive pre and post change parts.

**Time Table Summary:**

	<b>November 2017</b>	
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						December 2017				
Workweek	44	45	46	47	48	49	50	51	52	
Qual Report Availability			X							
Final PCN Issue Date			X							
Estimated Implementation Date							X			

**Method to Identify Change:**  
Traceability code

**Qualification Report:**  
Please open the attachments included with this PCN labeled as PCN\_#\_Qual Report.

**Revision History:**  
**November 15, 2017:** Issued final notification.  
**February 12, 2018:** Re-issued the final notification update the letter and Affected CPN list to include additional Atmel products available in 8L and 20L PDIP packages under CCB 3156.001 and CCB 3166.001 respectively.

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\\_KSRA-23FDQF538\\_Affected\\_CPN.pdf](#)
  - [PCN\\_KSRA-23FDQF538\\_Qual\\_Report.pdf](#)
  - [PCN\\_KSRA-23FDQF538\\_Affected\\_CPN.xlsx](#)

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

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**MICROCHIP**

**QUALIFICATION REPORT SUMMARY**  
RELIABILITY LABORATORY

**PCN #: KSRA-23FDQF538**

**Date**  
**August 22, 2017**

**Qualification of MMT as a new assembly site for selected Atmel products available in 40L PDIP package. The selected Atmel products available in 8L and 20L PDIP packages will qualify by similarity (QBS)**



## MICROCHIP PACKAGE QUALIFICATION REPORT

**Purpose:** Qualification of MMT as a new assembly site for selected Atmel products available in 40L PDIP package. The selected Atmel products available in 8L and 20L PDIP packages will qualify by similarity (QBS)

**CN** ES103401  
**QUAL ID** QTP3104  
**MP CODE** 354527S2XA01  
**Part No.** ATMEGA1284P-PU  
**CCB No.** 3166, 3166.001, 3156 and 3156.001

### Package

**Type** 40L PDIP  
**Package size** 600 mils  
**Die thickness** 15 mils  
**Die size** 200.0x167.0 mils

### Lead Frame

**Paddle size** 260x266 mils  
**Material** A194  
**Surface** Ag Spot Plated  
**Process** Stamped  
**Lead Lock** Yes  
**Part Number** 10104004  
**Treatment** None

### Material

**Epoxy** CRM-1064L  
**Wire** Au  
**Mold Compound** GE800  
**Plating Composition** Matte Tin



# MICROCHIP PACKAGE QUALIFICATION REPORT

## Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
MMT-181000279.000	MCSO518080266.000	1722H71
MMT-181000280.000	MCSO518080266.000	1722H72
MMT-181000281.000	MCSO518080266.000	1722H73

## Result

Pass

Fail

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Atmel's 35452 device using Au wire on 40L PDIP assembled by MMT (ALPH) pass reliability test per QCI-39000 which was conducted at MPHL rel lab.

# PACKAGE QUALIFICATION REPORT

Qual Report :

Test Number (Reference)	Test Condition	Standard / Method	Qty. (Acc.)	Def/SS	Result	Remarks
<b>Temp Cycle</b>	<b>Stress Condition:</b> (Standard) 65°C to +150°C, 500 Cycles System : VOTSCH VT 7012 S2	JESD22-A104		240		
	<b>Electrical Test:</b> + 85°C System: MT9320 Handler:0202		240	0/240	Passed	
	<b>Bond Strength:</b> Wire Pull (> 2.50 grams) Bond Shear (>15.00 grams)		15(0)	0/15	Passed	
<b>UNBIASED-HAST</b>	<b>Stress Condition:</b> (Standard) +130°C/85%RH, 96 hrs. System: HIRAYAMA HASTEST PC-422R8	JESD22-A118		238		
	<b>Electrical Test:</b> +85°C System: MT9320 Handler: 0202		238	0/238	Passed	
<b>HAST</b>	<b>Stress Condition:</b> (Standard) +130°C/85%RH, 96 hrs. <b>Bias Volt:</b> 5.5 Volts System: HIRAYAMA HASTEST PC-422R8	JESD22-A110		240		
	<b>Electrical Test:</b> +85°C System: MT9320 Handler:0202		240	0/240	Passed	
<b>High Temperature Storage Life</b>	<b>Stress Condition:</b> Bake 175°C, 504 hrs System: HERAEUS	JESD22-A103		50		45 units
	<b>Electrical Test</b> :+85°C System: MT9320 Handler:0202		50(0)	0/50	Pass	
<b>Bond Strength</b>	Wire Pull (> 2.50 grams)	M2011.8	30 (0) Wires	0/30	Pass	
<b>Data Assembly</b>	Bond Shear (>15.00 grams)	MIL-STD-883	30 (0) bonds	0/30	Pass	

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Affected Catalog Part Numbers (CPN)

PCN_KSRA-23FDQF538
CATALOG_PART_NBR
AT24C01C-PUM
AT24C02C-PUM
AT24C04C-PUM
AT24C08C-PUM
AT24C16C-PUM
AT24C64B-10PU-2.7
AT24HC02C-PUM
AT24HC04B-PU
AT89C2051-12PU
AT89C2051-24PU
AT89C4051-12PU
AT89C4051-24PU
AT89LP2052-20PU
AT89LP4052-20PU
AT89S2051-24PU
AT89S4051-24PU
AT93C46D-PU
AT93C46E-BPU
AT93C46E-PU
AT93C86A-10PU-1.8
AT93C86A-10PU-2.7
ATF16V8B-15PU
ATF16V8BQL-15PU
ATF16V8C-7PU
ATF16V8CZ-15PU
ATMEGA1284P-PU
ATMEGA1284-PU
ATTINY2313-20PU
ATTINY2313A-PU
ATTINY2313V-10PU
ATTINY26-16PU
ATTINY261A-PU
ATTINY26L-8PU
ATTINY4313-PU
ATTINY461-20PU
ATTINY461A-PU
ATTINY461V-10PU
ATTINY861-20PU
ATTINY861A-PU
ATTINY861V-10PU