



## Product Change Notification - GBNG-27TRZC226

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**Date:**

05 May 2020

**Product Category:**

8-bit Microcontrollers

**Affected CPNs:****Notification subject:**

CCB 4032 Final Notice: Qualification of MMT as a new assembly site for AT89C51ED2-SMSUM Atmel catalog part number (CPN) available in 68L PLCC (24.2x24.2x4.4mm) package.

**Notification text:****PCN Status:**

Final 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 AT89C51ED2-SMSUM Atmel catalog part number (CPN) available in 68L PLCC (24.2x24.2x4.4mm) package.

**Pre Change:**

Assembled at ANAP assembly site.

**Post Change:**

Assembled at MMT assembly site.

**Pre and Post Change Summary:**

	Pre Change	Post Change
Assembly Site	Amkor Technology Philippine (P1/P2), INC. (ANAP)	Microchip Technology Thailand (MMT)
Wire material	Au	Au
Die attach material	8361J	3280
Molding compound material	G600	G600

**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:**

May 30, 2020 (date code: 2022)

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

**Time Table Summary:**



	May 2020				
Workweek	19	20	21	22	23
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:**

**May 05, 2020:** Issued final notification. Attached the Qualification Report Provided estimated first ship date to be on May 30, 2020.

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\\_GBNG-27TRZC226\\_Qual\\_Report.pdf](#)

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

**Terms and Conditions:**

If you wish to receive Microchip PCNs via email please register for our PCN email service at our [PCN home page](#) select register then fill in the required fields. You will find instructions about registering for Microchips PCN email service in the [PCN FAQ](#) section.

If you wish to change your PCN profile, including opt out, please go to the [PCN home page](#) select login and sign into your myMicrochip account. Select a profile option from the left navigation bar and make the applicable selections.

Affected Catalog Part Numbers (CPN)

AT89C51ED2-SMSUM



**MICROCHIP**

## **QUALIFICATION REPORT SUMMARY RELIABILITY LABORATORY**

**PCN #: GBNG-27TRZC226**

**Date  
June 17, 2013**

**Qualification of MMT as a new assembly site for  
AT89C51ED2-SMSUM Atmel catalog part number (CPN)  
available in 68L PLCC (24.2x24.2x4.4mm) package.**



## **MICROCHIP**

### **PACKAGE QUALIFICATION REPORT**

<b>Purpose</b>	Qualification of MMT as a new assembly site for AT89C51ED2-SMSUM Atmel catalog part number (CPN) available in 68L PLCC (24.2x24.2x4.4mm) package.
<b>CCB No.</b>	1213.02 and 4032
<b>CN</b>	BC130309
<b>QUAL ID</b>	Q13039 Rev. A
<b>MP CODE</b>	CEAD17W2XBXF
<b>Part No.</b>	PIC18F6585-I/L
<b>Bonding No.</b>	BDM-000295 Rev. B
<b><u>Package</u></b>	
<b>Type</b>	68L PLCC
<b><u>Lead Frame</u></b>	
<b>Paddle size</b>	260 x 260 mils
<b>Material</b>	CDA151
<b>Surface</b>	Ag spot
<b>Process</b>	Stamped
<b>Lead Lock</b>	No
<b>Part Number</b>	LF-PL068-01
<b><u>Die attach material</u></b>	
<b>Epoxy</b>	3280
<b>Wire</b>	Au wire
<b>Mold Compound</b>	G600
<b>Plating Composition</b>	Matte Tin



## **MICROCHIP**

### **PACKAGE QUALIFICATION REPORT**

#### **Manufacturing Information**

<b>Assembly Lot No.</b>	<b>Wafer Lot No.</b>	<b>Date Code</b>
ALPH134800605	TMPE213299636.100	1309Q6U
ALPH134800606	TMPE213299636.100	1309Q7D
ALPH134900067	TMPE213299636.100	1310Q7U

#### **Result**

☒ Pass    ☐ Fail    ☐ \_\_\_\_\_

68L PLCC assembled by MMT (ALPH) pass reliability test per QCI-39000. This package was qualified the Moisture/Reflow Sensitivity Classification Level 1 at 245°C reflow temperature per IPC/JEDEC J-STD-020D standard.

## PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS	Result	Remarks
<b>Moisture/Reflow Sensitivity Classification Test (At MSL Level 1)</b>	85°C/ 85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH 3x Convection-Reflow 245°C max System: Vitronics Soltec MR1243  ( IPC/JEDEC J-STD-020D)	IPC/JEDEC C J-STD- 020D	135	0/135	Pass	

<b><u>Precondition Prior Perform Reliability Tests</u></b> (At MSL Level 1)	<b>Electrical Test</b> :+85°C and -40°C System: J750	JESD22- A113	693(0)	693		Good Devices
	Bake 150°C, 24 hrs System: CHINEE			693		
	85°C/85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH			693		
	3x Convection-Reflow 245°C max System: Vitronics Soltec MR1243			693		
	<b>Electrical Test</b> :+25°C and 85°C System: J750			0/693	Pass	

## PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	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	JESD22-A104		231		Parts had been pre-conditioned at 260°C
	<b>Electrical Test:</b> + 85°C System: J750		231(0)	0/231	Pass	77 units / lot
	<b>Bond Strength:</b> Wire Pull (> 4.0 grams)		15 (0)	0/15	Pass	
	Bond Shear (18.00 grams)		15 (0)	0/15	Pass	
<b>UNBIASED-HAST</b>	<b>Stress Condition:</b> +130°C/85%RH, 96 hrs. System: HAST 6000X	JESD22-A118		231		Parts had been pre-conditioned at 260°C
	<b>Electrical Test:</b> +25°C System: J750		231(0)	0/231	Pass	77 units / lot
<b>HAST</b>	<b>Stress Condition:</b> +130°C/85%RH, 96 hrs. <b>Bias Volt:</b> 5.5 Volts System: HAST 6000X	JESD22-A110		231		Parts had been pre-conditioned at 260°C
	<b>Electrical Test:</b> +25°C and 85°C System: J750		231(0)	0/231	Pass	77 units / lot
<b>High Temperature Storage Life</b>	<b>Stress Condition:</b> Bake 175°C, 504 hrs System: SHEL LAB	JESD22-A103		45		45 units
	<b>Electrical Test</b> :+25°C and 85°C System: J750		45(0)	0/45	Pass	

**PACKAGE QUALIFICATION REPORT**

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
<b>Physical Dimensions</b>	Physical Dimension,  30 units from 1 lot	JESD22- B100/B108	30(0) Units	0/30	Pass	
<b>Bond Strength</b>	Die shear (>2.5 Kaf.)	MIL-STD- 883 METHOD 2019	30 (0) Die	0/30	Pass	
	Wire Pull (> 4.0 grams)	JESD22- B116	30 (0) Wires	0/30	Pass	
<b>Data Assembly</b>	Bond Shear (18.00 grams)		30 (0) bonds	0/30	Pass	