

Product Change Notification - WE164801

Date: 23 May 2017
Product Category: Capacitive Touch Sensors; 8-bit PIC Microcontrollers
Notification subject: CCB 2949 Final Notice: Qualification of MTAI as an Assembly and Final test site for selected Atmel AVR and Touch Solutions products available in 6L SOT-23 package.
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 MTAI as an Assembly and Final test site for selected Atmel AVR and Touch Solutions products available in 6L SOT-23 package. This notification was originally issued to announce the End of life (EOL) of selected AVR and Touch Solutions Products assembled at UTAC in 6L SOT23 package. Microchip has decided not to proceed with the EOL of these products. Instead, these products will now be qualified at MTAI as its assembly and final test site.

Pre Change:

NSEB assembly and final test site using NiPdAu lead finish

Post Change:

MTAI assembly and final test site using Matte Sn lead finish

Pre and Post Change Summary:

	Pre Change	Post Change
Assembly and Final Test Site	NSEB	MTAI
Wire Material	Au	Au
Die Attach Material	8006NS	8006NS
Molding Compound Material	G600	G600
Lead frame Material	C194	C194
Lead finish	NiPdAu	Matte Sn

Impacts to Data Sheet:

None

Change Impact:

None

Reason for Change:

To improve manufacturability and on-time delivery performance by qualifying MTAI as an Assembly and Final test site which will remove anticipated capacity constraints of this product.

Change Implementation Status:

In Progress

Estimated First Ship Date for Assembly Site:

June 22, 2017

Estimated Qualification Completion Date for Final Test:

June 2017*

*Final PCN will be revised to include the Final Test site qualification data once available.

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:

	December 2016					->	May 2017					June 2017			
Workweek	48	49	50	51	52		18	19	20	21	22	23	24	25	26
Original PCN Issue Date		X													
Final PCN Issue Date										X					
Qualification Report Availability for Final Test													X		
Estimated First Ship date for Assembly Site														X	

Method to Identify Change:

Traceability code

Qualification Report:

Please open the attachments included with this PCN labeled as PCN_#_Qual Report for Assembly Site.

Qualification Plan:

Please open the attachments included with this PCN labeled as PCN_#_Qual Plan for Final Test Site.

Revision History:

December 05, 2016: Issued the Original Notification

May 23, 2017: Issued final notification. Removed the replacement parts because the existing CPNs will not be EOL'd. Revised the Pre and Post Change. Attached the assembly site qualification report and provided the estimated First Ship date.

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_WE164801_Affected CPN.pdf](#)
[PCN_WE164801_Qual_Plan.pdf](#)
[PCN_WE164801_Qual_Report.pdf](#)
[PCN_WE164801_Affected CPN.xlsx](#)

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

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Affected Catalog Part Numbers

PCN_WE164801
CATALOG_PART_NBR
AT42QT1010-TSHR
AT42QT1011-TSHR
AT42QT1012-TSHR
ATTINY10-TS8R
ATTINY10-TS8R526
ATTINY10-TS8RB67
ATTINY10-TS8RB68
ATTINY10-TSHR
ATTINY10-TSHR867
ATTINY4-TS8R
ATTINY4-TSHR
ATTINY4-TSHR485
ATTINY4-TSHR627
ATTINY4-TSHR685
ATTINY4-TSHRA92
ATTINY4-TSHRB55
ATTINY4-TSHRB71
ATTINY5-TS8R
ATTINY5-TSHR
ATTINY5-TSHR844
ATTINY5-TSHR844
ATTINY5-TSHR964
ATTINY5-TSHR992
ATTINY9-TS8R
ATTINY9-TSHR



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QUALIFICATION PLAN SUMMARY

PCN #: WE164801

**Date:
May 11, 2017**

**Qualification of MTAI as an Assembly and Final test
site for selected Atmel AVR and Touch Solutions
products available in 6L SOT-23 package.**

Purpose: _____ Qualification of MTAI as an Assembly and Final test site for selected Atmel AVR and Touch Solutions products available in 6L SOT-23 package.

CCB No: _____ 2949

Test / Evaluation	Test Conditions / Parameters
Datalog / Bin Comparison	Compare test numbers, test names, test sequence bin assignments & pass/fail results. Accept if all match or justify the differences
Site by site verification	Verifies the channel map has the correct site assignments and tester/handler communications work correctly
Correlation lot report	Yield at each step and reject analysis between systems. 5K units are tested for each program conversion we perform. Accept on yield match within 1%
Unit to unit parametric correlation	A full assembly strip characterized on both systems and graphed vs each other & the data sheet limits
Test stability verification	50 loop test performed with no datalog delays Accept on 0 fails
Parametric test stability verification	Use Real Time Statistics software to create CPK report of all parametric tests Accept on Cpk > 1.67 or explainable



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QUALIFICATION REPORT SUMMARY
RELIABILITY LABORATORY

PCN #: WE164801

Date
May 16, 2017

**Qualification of MTAI as an Assembly and Final test site for
selected Atmel AVR and Touch Solutions products available
in 6L SOT-23 package.**



MICROCHIP **PACKAGE QUALIFICATION REPORT**

Purpose Qualification of MTAI as an Assembly and Final test site for selected Atmel AVR and Touch Solutions products available in 6L SOT-23 package.

Part No. TINY10

CCB No. 2949

Package

Type 6L SOT-23

Lead Frame

Material CDA194

Plating Composition Matte Sn

Die attach material

Epoxy 8006NS

Wire Au

Mold Compound G600

Manufacturing Information

Assembly Lot No.	Device Type	Date Code
A8G2QBYPG3-A	TINY10	1628
A8G2QBYPG3-B	TINY10	1628
A8G2QBYPG3-C	TINY10	1628

Result

Pass Fail _____

6L SOT-23 assembled by MTAI pass reliability test per QCI-39000.
This package was qualified the Moisture/Reflow Sensitivity Classification Level 1 at 260°C reflow temperature per IPC/JEDEC J-STD-020D standard.

Test Number (Reference)	Test Condition	Standard/ Method	Result	Remarks
Moisture/Reflow Sensitivity Classification Test (At MSL Level 1)	85°C/ 85%RH Moisture Soak 168 hrs. (IPC/JEDEC J-STD-020D)	IPC/JEDEC J-STD-020D	Pass	
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.	Jedec- STD-020D	Pass	
Temp Cycle	Stress Condition: (Standard) 65°C to +150°C, 500 Cycles	JESD22- A104	Pass	Parts had been pre-conditioned at 260°C
UNBIASED-HAST	Stress Condition: (Standard) +110°C/85%RH, 264 hrs.	JESD22- A118	Pass	Parts had been pre-conditioned at 260°C
HAST	Stress Condition: (Standard) 110°C/85%RH, 264 hrs. Bias Volt: 5.5 Volts	JESD22- A110	Pass	Parts had been pre-conditioned at 260°C
High Temperature Storage Life	Stress Condition: Bake 175°C, 500 and 1000 hrs	JESD22- A103	Pass	