



Product Change Notification / JAON-13YWCO205

Date:

16-Jul-2020

Product Category:

8-bit Microcontrollers

PCN Type:

Manufacturing Change

Notification Subject:

CCB 3600.007 Final Notice: Qualification of MMT as an additional assembly site for selected Atmel products available in 40L PDIP package.

Affected CPNs:

[JAON-13YWCO205_Affected_CPN_07162020.pdf](#)

[JAON-13YWCO205_Affected_CPN_07162020.csv](#)

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 an additional assembly site for selected Atmel products available in 40L PDIP package.

Pre Change:

Assembled at LPI assembly site using palladium coated copper with gold flash (CuPdAu) bond wire, CRM-1033BF die attach and G600 mold compound material or assembled at ASSH using palladium coated copper (PdCu) bond wire, EN-4900G die attach and CEL-9240 mold compound material.

Post Change:

Assembled at ASSH using palladium coated copper (PdCu) bond wire, EN-4900G die attach and CEL-9240 mold compound material or assembled at MMT assembly site using palladium coated copper with gold flash (CuPdAu) bond wire, CRM-1064L die attach and GE800 mold compound material.

Pre and Post Change Summary:

	Pre Change		Post Change	
Assembly Site	Lingsen Precision Industries, Taiwan (LPI)	ASE-Shanghai (ASSH)	ASE-Shanghai (ASSH)	Microchip Technology Thailand (Branch) - (MMT)
Wire material	CuPdAu	PdCu	PdCu	CuPdAu
Die attach material	CRM-1033BF	EN-4900G	EN-4900G	CRM-1064L
Molding compound material	G600	CEL-9240	CEL-9240	GE800
Lead frame material	CDA194	CDA194	CDA194	CDA194

Impacts to Data Sheet: None

Change Impact:None

Reason for Change:To improve on time delivery performance by qualifying MMT as an additional assembly site. Due to unforeseen business conditions the LPI location will be discontinued as an assembly site for 40L PDIP package.

Change Implementation Status:In Progress

Estimated First Ship Date:August 15, 2020 (date code: 2033)

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

Time Table Summary:

	July 2020					August 2020				
Workweek	27	28	29	30	31	32	33	34	35	36
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: July 16, 2020: Issued final notification. Attached the qualification report. Provided estimated first ship date to be on August 15, 2020.

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

Attachments:

[PCN_JAON-13YWCO205_Qual_Report.pdf](#)

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

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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)

AT89LS51-16PU

AT89S51-24PU

AT89LS52-16PU

AT89S52-24PU



QUALIFICATION REPORT SUMMARY
RELIABILITY LABORATORY

PCN #: JAON-13YWCO205

Date:
October 28, 2019

**Qualification of MMT as an additional assembly site for
selected Atmel products available in 40L PDIP package.**



MICROCHIP

PACKAGE QUALIFICATION REPORT

Purpose Qualification of MMT as an additional assembly site for selected Atmel products available in 40L PDIP package.
CN ES303598
QUAL ID Q19095 rev A
MP CODE 354527S2XA01
Part No. ATMEGA1284P-PU
Bonding No. BDM-001967 Rev. A
CCB No. 3600, 3600.001, 3600.002, 3600.003, 3600.004, 3600.005, 3600.006 and 3600.007

Package

Type 40L PDIP
Package size 600 mils

Lead Frame

Paddle size 260 x 266 mils
Material CDA194
Surface Ag Spot Plated
Process Stamped
Lead Lock Yes
Part Number 10104004

Die attach material

Epoxy CRM-1064L
Wire CuPdAu wire
Mold Compound GE800
Plating Composition Matte Tin



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PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
MMT-201101010.000	MCSO519496553.210	1924EPS
MMT-201101013.000	MCSO519496553.210	1924ERS
MMT-201101391.000	MCSO519496553.210	1924H10

Result

Pass

Fail

40L PDIP (.600") assembled by MMT pass reliability test per QCI-39000.

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks	
Electrical Test	Electrical Test: +25°C and 85°C System: J750	JESD22- A113	693(0)	693		Good Devices	
Temp Cycle	Stress Condition: -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		77 units / lot	
	Electrical Test: +85°C System: MAV1_PT		231(0)	0/231	Pass		
	Stress Condition: -65°C to +150°C, 1000 Cycles System : TABAI ESPEC TSA-70H Inspection: External crack inspection all units under 40X Optical magnification				231		
	Electrical Test: +85°C System: MAV1_PT		231(0)	0/231	Pass		
	Bond Strength: Wire Pull (> 2.50 grams) Bond Shear (15.00 grams)		15 (0)	0/15	Pass		
			15 (0)	0/15	Pass		
UNBIASED-HAST	Stress Condition: +130°C/85%RH, 96 hrs. System: HAST 6000X	JESD22- A118		231		77 units / lot	
	Electrical Test: +85°C System: MAV1_PT		231(0)	0/231	Pass		
	Stress Condition: +130°C/85%RH, 192 hrs. System: HAST 6000X				231		
	Electrical Test: +85°C System: MAV1_PT		231(0)	0/231	Pass		

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
HAST	Stress Condition: +130°C/85%RH, 96 hrs. Bias Volt: 5.5 Volts System: HAST 6000X	JESD22-A110		231		77 units / lot
	Electrical Test: +85°C System: MAV1_PT		231(0)	0/231	Pass	
	Stress Condition: +130°C/85%RH, 192 hrs. Bias Volt: 5.5 Volts System: HAST 6000X			231		
	Electrical Test: +85°C System: MAV1_PT		231(0)	0/231	Pass	
High Temperature Storage Life	Stress Condition: Bake 175°C, 504 hrs System: SHEL LAB	JESD22-A103		45		45 units
	Electrical Test: +85°C System: MAV1_PT		45(0)	0/45	Pass	
Bond Strength Data Assembly	Wire Pull (> 2.50 grams)	M2011	30 (0) Wires	0/30	Pass	
	Bond Shear (15.00 grams)	JESD22-B116	30 (0) bonds	0/30	Pass	