Product Change Notification - GBNG-26MNLV879

Date:
28 May 2020
Product Category:
8-bit Microcontrollers
Affected CPNs:

Notification subject:
CCB 3600.004, 3600.005 and 3600.006 Final Notice: Qualification of MMT as a new assembly site for selected Atmel products available in 8L, 14L and 40L PDIP packages.
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 selected Atmel products available in 8L, 14L and 40L PDIP packages.

Pre Change:
Assembled at LPI assembly site using gold (Au) or palladium coated copper with gold flash (CuPdAu) bond wire, CRM-1033BF die attach and G600 mold compound material.
Post Change:
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)	Microchip Technology Thailand (Branch) - (MMT)
Wire material	Au | CuPdAu	CuPdAu
Die attach material	CRM-1033BF	CRM-1064L
Molding compound material	G600	GE800
Lead frame material	CDA194	CDA194

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. Due to unforeseen business conditions the LPI location will be discontinued as an assembly site for 8L, 14L and 40L PDIP packages.
Change Implementation Status:

In Progress

Estimated First Ship Date:

June 15, 2020 (date code: 2025)

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

Time Table Summary:

	May 2020					June 2020				
Workweek	18	19	20	21	22	23	24	25	26	27
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 28, 2020: Issued final notification. Attached the qualification report.

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-26MNLV879_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)

ATMEGA324A-PU
ATMEGA324PA-PU
ATMEGA324PA-PN
ATTINY13A-PU
ATMEGA32A-PU
ATMEGA32A-PN
ATTINY44A-PU
ATTINY24A-PU
ATMEGA164A-PU
ATMEGA164PA-PU
ATMEGA644A-PU
ATMEGA644PA-PU
ATTINY84A-PU
ATTINY13-20PU
ATTINY13V-10PU
ATTINY13V-10PQ
ATTINY85-20PU
ATTINY85V-10PU
AT89S8253-24PU
ATMEGA16-16PU
ATMEGA16-16PUA6
ATMEGA8515-16PU
ATMEGA8515L-8PU
ATMEGA8535-16PU
ATMEGA8535L-8PU
ATMEGA32-16PU
ATMEGA32-16PUA3
ATMEGA32L-8PU
ATMEGA162-16PU
ATMEGA162V-8PU
AT89LP213-20PU
AT89LP214-20PU
ATTINY84V-10PU
ATTINY84-20PU
ATMEGA644-20PU
ATMEGA644V-10PU
ATMEGA164P-20PU
ATMEGA164PV-10PU
ATMEGA164P-20PQ
ATMEGA164PV-10PQ
ATMEGA324P-20PU
ATMEGA324PV-10PU
ATTINY45-20PU
ATTINY45V-10PU
ATTINY44-20PU
ATTINY44V-10PU

ATTINY25-20PU

ATTINY25V-10PU

ATTINY24-20PU

ATTINY24V-10PU

ATMEGA644P-20PU

ATMEGA644PV-10PU

ATMEGA644PV-10PQ

ATMEGA644P-20PQ

AT89LP51-20PU

AT89LP52-20PU

AT89LP3240-20PU

AT89LP6440-20PU

QUALIFICATION REPORT SUMMARY

RELIABILITY LABORATORY

PCN #: GBNG-26MNLV879

Date
October 28, 2019

Qualification of MMT as a new assembly site for selected Atmel products available in 40L PDIP package. The selected products available in 8L and 14L PDIP packages will qualify by similarity (QBS).

PACKAGE QUALIFICATION REPORT

Purpose: Qualification of MMT as a new assembly site for selected Atmel products available in 40L PDIP package. The selected products available in 8L and 14L PDIP packages will qualify by similarity (QBS).

CN	ES303598
QUAL ID	Q19095 Rev. A
MP CODE	354527S2XA01
Part No.	ATMEGA1284P-PU
Bonding No.	BDM-001967 Rev. A
CCB No.	3600, 3600.004, 3600.005, 3600.006

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
Mold Compound	GE800
Plating Composition	Matte Tin

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 [X] 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		
	Electrical Test: +85°C System: MAV1_PT		231(0)	0/231	Pass	77 units / lot
	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)		15 (0)	0/15	Pass	
	Bond Shear (15.00 grams)		15 (0)	0/15	Pass	
UNBIASED-HAST	**Stress Condition:** +130°C/85%RH, 96 hrs. System: HAST 6000X	JESD22-A118		231		
	Electrical Test: +85°C System: MAV1_PT		231(0)	0/231	Pass	77 units / lot
	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		
	Electrical Test: +85°C System: MAV1_PT		231(0)	0/231	Pass	77 units / lot
	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	