Product Change Notification / GBNG-06YZDC217

Date:

27-Oct-2020

Product Category:

Motor Drivers

PCN Type:

Manufacturing Change

Notification Subject:

CCB 4135 Final Notice: Qualification of MMT as an additional assembly site for selected MCP8025xx and MCP8026xx device families available in 40L QFN (5x5x0.9mm) and 40L VQFN (5x5x0.9mm) packages.

Affected CPNs:

GBNG-06YZDC217_Affected_CPN_10272020.pdf
GBNG-06YZDC217_Affected_CPN_10272020.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 right

NOTE: For your convenience Microchip includes identical files in two formats (.pdf and .csv).

Description of Change: Qualification of MMT as an additional assembly site for selected MCP8025xx and MCP8026xx device families available in 40L QFN (5x5x0.9mm) and 40L VQFN (5x5x0.9mm) packages.

Pre Change:
Assembled at NSEB using 8200T or 8600 die attach and G770HCD or G700LTD molding compound material.

Post Change:
Assembled at NSEB using 8200T or 8600 die attach and G770HCD or G700LTD molding compound material or assembled at MMT using 3280 die attach and G700LTD molding compound material.

Pre and Post Change Summary:

	Pre Change		Post Change		
Assembly Site	UTAC Thai Limited (UTL-1) LTD. (NSEB)		UTAC Thai Limited (UTL-1) LTD. (NSEB)		Microchip Technology Thailand (Branch) (MMT)
Wire material	Au		Au		Au
Die attach material	8200T	8600	8200T	8600	3280
Molding compound material	G770HCD	G700LTD	G770HCD	G700LTD	G700LTD
Lead frame material	C194		C194		C194

Impacts to Data Sheet: None

Change Impact: None

Reason for Change: To improve on-time delivery and performance by qualifying MMT as an additional assembly site.

Change Implementation Status: In Progress

Estimated First Ship Date
November 27, 2020 (date code: 2048)

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

Time Table Summary:

	March 2020					- - >	October 2020					November 2020			
Workweek	10	11	12	13	14		40	41	42	43	44	45	46	47	48
Initial PCN Issue Date				X											
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:March 26, 2020: Issued initial notification**October 27, 2020.** Issued final notification. Attached the Qualification Report. Provided estimated first ship date to be on November 27, 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_GBNG-06YZDC217_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 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)

MCP8025-115E/MP
MCP8026-115E/MP
MCP8026-115E/MPB3
MCP8025A-115E/MP
MCP8025T-115H/MP
MCP8026T-115H/MP
MCP8025AT-115H/MP
MCP8025T-115H/MPVAO
MCP8025AT-115H/MPVAO
MCP8025-115H/MP
MCP8026-115H/MP
MCP8025A-115H/MP
MCP8025A-115H/MPVAO
MCP8025T-115E/MP
MCP8026T-115E/MP
MCP8026T-115E/MPB3
MCP8025AT-115E/MP

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QUALIFICATION REPORT SUMMARY

RELIABILITY LABORATORY

PCN #: GBNG-06YZDC217

Date
September 10, 2020

Qualification of MMT as an additional assembly site for selected MCP8025xx and MCP8026xx device families available in 40L QFN (5x5x0.9mm) and 40L VQFN (5x5x0.9mm) packages.

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PACKAGE QUALIFICATION REPORT

Purpose	Qualification of MMT as an additional assembly site for selected MCP8025xx and MCP8026xx device families available in 40L QFN (5x5x0.9mm) and 40L VQFN (5x5x0.9mm) packages.
CN	ES340527
QUAL ID	R2000228 Rev A
CCB #:	4135
MP CODE	VGBD3JNHXA02
Part No.	MCP8025T-115H/NHX
Bonding No.	BDM-002339 Rev. A
Package	
Type	40L VQFN
Package size	5x5x0.9 mm
Lead Frame	
Paddle size	154 x 154 mils
Material	C194
Surface	Ag ring plated on DAP
Process	Etched
Lead Lock	Yes
Part Number	10104013
Material	
Epoxy	3280
Wire	Au wire
Mold Compound	G700LTD
Plating Composition	Matte Tin

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PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
MMT-205000302.000	TC08919457741.100	2011D5E
MMT-205001059.000	TC08919457741.100	2011HJU
MMT-205001501.000	TC08919457741.100	2011MBR

Result ☒ Pass ☐ Fail ☐ ____________________

40L VQFN (5x5x0.9 mm) assembled by MMT 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-020E standard.

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	**Test Condition**	**Standard/ Method**	**Qty. (Acc.)**	**Def/SS**	**Result**	**Remarks**
Precondition Prior Perform Reliability Tests (At MSL Level 1)	**Electrical Test:** +25°C, 85°C, 125°C and 150°C System: Eagle ETS-300	JESD22-A113	693(0)	693		Good Devices
	Bake 150°C, 24 hrs System: CHINEE	JIP/ IPC/JEDEC J-STD-020E		693		
	85°C/85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH			693		
	3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243			693		
	Electrical Test: +25°C, 85°C, 125°C and 150°C System: Eagle ETS-300			0/693	Pass	

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
Temp Cycle	**Stress Condition:** -55°C to +150°C, 2000 Cycles System: TABAI ESPEC TSA-70H	JESD22-A104		231		Parts had been pre-conditioned at 260°C
	Electrical Test: +85°C, 125°C and 150°C System: Eagle ETS-300		231(0)	0/231	Pass	77 units / lot
	Bond Strength: Wire Pull (> 4.00 grams),		15 (0)	0/15	Pass	
	Bond Shear (>18.00 grams		15 (0)	0/15	Pass	
UNBIASED-HAST	**Stress Condition:** +130°C/85%RH, 96 hrs. System: HAST 6000X	JESD22-A118		231		Parts had been pre-conditioned at 260°C
	Electrical Test: +25°C System: Eagle ETS-300		231(0)	0/231	Pass	77 units / lot
HAST	**Stress Condition:** +130°C/85%RH, 96 hrs. **Bias Volt:** 5.5 Volts System: HAST 6000X	JESD22-A110		231		Parts had been pre-conditioned at 260°C
	Electrical Test: +25°C, 85°C, 125°C and 150°C System: Eagle ETS-300		231(0)	0/231	Pass	77 units / lot

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	**Test Condition**	**Standard/ Method**	**Qty. (Acc.)**	**Def/SS.**	**Result**	**Remarks**
High Temperature Storage Life	**Stress Condition:** Bake 175°C, 1000 hrs System: SHEL LAB	JESD22-A103		45		45 units
	Electrical Test: +25°C, 85°C, 125°C and 150°C System: Eagle ETS-300		45(0)	0/45	Pass	
Solderability **Temp 215°C**	**Steam Aging:** Temp 93°C,8Hrs System: SAS-3000 Solder Dipping: Solder Temp.215°C Solder material: SnPb Sn63, Pb37 System: ERSA RA 2200D Visual Inspection: External Visual Inspection	J-STD-002	22 (0)	22 22 0/22	Pass	
Solderability **Temp 245°C**	**Steam Aging:** Temp 93°C,8Hrs System: SAS-3000 Solder Dipping:Solder Temp.245°C Solder material:Pb Free Sn 95.5Ag3.9 Cu0.6 System: ERSA RA 2200D Visual Inspection: External Visual Inspection	J-STD-002	22 (0)	22 22 0/22	Pass	
Bond Strength **Data Assembly**	Wire Pull (> 4.00 grams)	M2011	30 (0) Wires	0/30	Pass	
	Bond Shear (>18.00 grams)	JESD22-B116	30 (0) bonds	0/30	Pass	