Product Change Notification / GBNG-14UHSW677

Date:

01-Mar-2021

Product Category:

Inductive Position Sensors

PCN Type:

Manufacturing Change

Notification Subject:

CCB 4214.001 Final Notice: Qualification of MMT as a new assembly site for selected MSCC LX3302Axxx and LX34050xxx device families available in 14L TSSOP (4.4mm) package.

Affected CPNs:

GBNG-14UHSW677_Affected_CPN_03012021.pdf
GBNG-14UHSW677_Affected_CPN_03012021.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.

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 MSCC LX3302Axxx and LX34050xxx device families available in 14L TSSOP (4.4mm) package.

Pre and Post Change Summary:

		Pre Change	Post Change
Assembly Site		UTAC Thai Limited (UTL-1) LTD. (NSEB)	Microchip Technology Thailand - Branch (MMT)
Wire material		PdCu	Au
Die attach material		8200T	2200D
Molding compound material		G605L	G600V
Lead frame	**Material**	C7025	C7025
	DAP Surface Prep	Copper Spot Ag	Bare Cu
	Paddle Size	126x150 mils	118x153 mils

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.

Change Implementation Status:

In Progress

Estimated First Ship Date:

March 01, 2021 (date code: 2110)

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

Time Table Summary:

	March 2021				
Workweek	10	11	12	13	14
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 01, 2021: Issued final notification. Attached the Qualification Report. Provided estimated first ship date to be on March 01, 2021.

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-14UHSW677_Qual_Report.pdf
PCN_GBNG-14UHSW677_Pre and Post Change Summary.pdf

Please contact your local Microchip sales office with questions or concerns regarding this notification.

Terms and Conditions:

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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.

QUALIFICATION REPORT SUMMARY
RELIABILITY LABORATORY

PCN #: GBNG-14UHSW677

Date
January 20, 2021

Qualification of MMT as a new assembly site for selected MSCC LX3302Axxx and LX34050xxx device families available in 14L TSSOP (4.4mm) package. This is an AEC Q100 qualification.

PACKAGE QUALIFICATION REPORT

Purpose	**Qualification of MMT as a new assembly site for selected MSCC LX3302Axxx and LX34050xxx device families available in 14L TSSOP (4.4mm) package. This is an AEC Q100 qualification.**
CCB No.	4214 and 4214.001
CN	ES349038
QUAL ID	R2000785 Rev. A
MP CODE	VXBC19D4XVA1
Part No.	LX3302AQPW
Bonding No.	BDM-002287 Rev. B

Package

Type	14L TSSOP
Package size	4.4 mm

Lead Frame

Paddle size	118 x 153 mils
Material	C7025
Surface	Bare Copper
Process	Stamped
Lead Lock	None
Part Number	10101406
Treatment	BOT

Material

Epoxy	2200D
Wire	Au wire
Mold Compound	G600V
Plating Composition	Matte Tin

PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
MMT-212602879.000	XFML920338535.200	2040C3K
MMT-212602945.000	XFML920338535.200	2040RJS
MMT-212700988.000	XFML920338535.200	2040RJT

Result ☑ Pass ☐ Fail ☐ ____________________

14L TSSOP 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 and 150°C System: ETS88	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 and 150°C System: ETS88			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: + 150°C System: ETS88		231(0)	0/231	Pass	77 units / lot
	Bond Strength:					
	Wire Pull (>4.0 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: ETS88		231(0)	0/231	Pass	77 units / lot
HAST	**Stress Condition:** +130°C/85%RH, 96 hrs. **Bias Volt:** 6.0 Volts System: HAST 6000X	JESD22-A110		231		Parts had been pre-conditioned at 260°C
	Electrical Test: +25°C and 150°C System: ETS88		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 and 150°C System: ETS88		45(0)	0/45	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	
Physical **Dimensions**	Physical Dimension, 10 units from 1 lot	JESD22-B100/B108	30(0) Units	0/30	Pass	
Bond Strength **Data Assembly**	Wire Pull (>4.00 grams)	Mil.Std. 883-2011	30 (0) Wires	0/30	Pass	
	Bond Shear (>18.00 grams)	CDF-AEC-Q100-001	30 (0) bonds	0/30	Pass	

PRE AND POST CHANGE SUMMARY

CCB 4214.001

PCN #: GBNG-14UHSW677

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Lead Frame Comparison

<table>
<tr><th>Pre Change</th><th>Post Change</th></tr>
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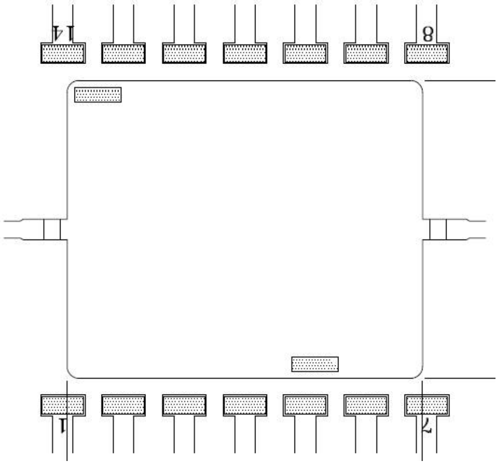
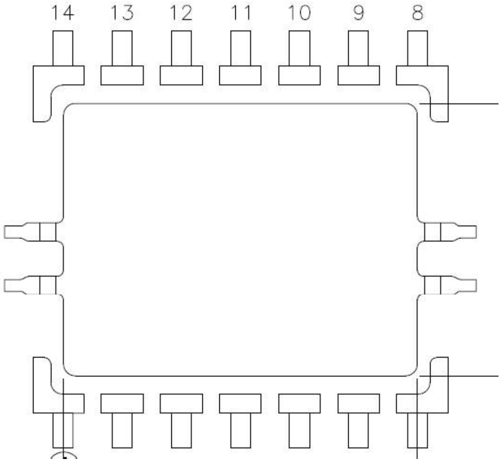


<table>
<tr><td>DAP Surface Prep</td><td>Copper Spot Ag</td></tr>
<tr><td>Paddle Size</td><td>126x150 mils</td></tr>
</table>
</td><td>


<table>
<tr><td>DAP Surface Prep</td><td>Bare Cu</td></tr>
<tr><td>Paddle Size</td><td>118x153 mils</td></tr>
</table>
</td></tr>
</table>

GBNG-14UHSW677 - CCB 4214.001 Final Notice: Qualification of MMT as a new assembly site for selected MS

Affected Catalog Part Numbers(CPN)

LX34050QPW
LX3302AQPW-EASY
LX3302AQPW
LX34050QPW-VAO
LX34050QPW-TR
LX3302AQPW-TR-EASY
LX3302AQPW-TR
LX34050QPW-TR-VAO