Product Change Notification - GBNG-08VONE361

Date:

21 Dec 2018

Product Category:

Linear Regulators; Power MOSFET Drivers; Temperature Sensors; Linear Regulator ICs

Affected CPNs:

Notification subject:

CCB 3450 and 3450.001 Final Notice: Qualification of GTBF as a new assembly site in selected products of 6um, 0.6um AMI, 0.6um TSMC, 42K, 130K,133K, and BIC1 Supertex wafer technologies available in 3L and 5L TO-220 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 GTBF as a new assembly site in selected products of 6um, 0.6um AMI, 0.6um TSMC, 42K, 130K,133K, and BIC1 Supertex wafer technologies available in 3L and 5L TO-220 packages.

Pre Change:

Assembled at CARM using 84-1 LMISR4 or 2815A die attach, CEL-9240HF10 molding compound and HCL-12S lead frame material.

Post Change:

Assembled at GTBF using CRM-1800 die attach, EME-G600 molding compound and LY80 lead frame material.

Pre and Post Change Summary:

<table>
<tr><th></th><th colspan="2">Pre Change</th><th>Post Change</th></tr>
<tr><td>Assembly Site</td><td colspan="2">Carsem (M) SDN BHD (CARM)</td><td>Great Team Backend Foundry (Dong Guan) Ltd. (GTBF)</td></tr>
<tr><td>Wire material</td><td colspan="2">Au</td><td>Au</td></tr>
<tr><td>Die attach material</td><td>84-1 LMISR4</td><td>2815A</td><td>CRM-1800</td></tr>
<tr><td>Molding compound material</td><td colspan="2">CEL-9240HF10</td><td>EME-G600</td></tr>
<tr><td>Lead frame material</td><td colspan="2">HCL-12S</td><td>LY80</td></tr>
</table>

Impacts to Data Sheet:

None

Change Impact:

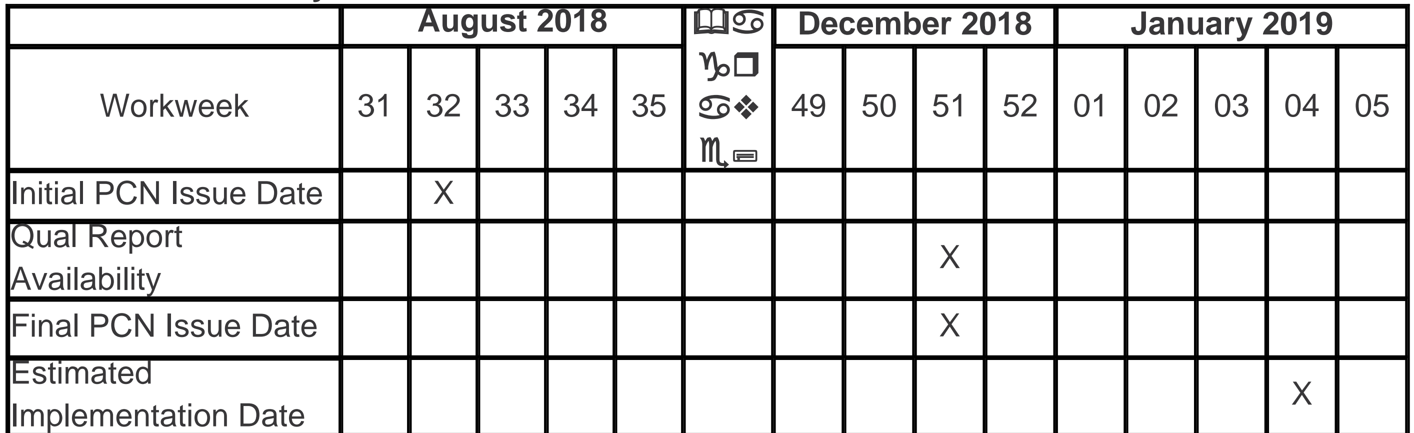
None

Reason for Change:

To improve on-time delivery performance by qualifying GTBF as a new assembly site. CARM assembly site will no longer have manufacturing support for the selected products.

Change Implementation Status:
In Progress
Estimated First Ship Date:
January 21, 2019 (date code: 1904)
NOTE: Please be advised that after the estimated first ship date customers may receive pre and post change parts.

Time Table Summary:



	August 2018					🕮♋	December 2018				January 2019				
Workweek	31	32	33	34	35	♑❐ ♋❖ ♏🖃	49	50	51	52	01	02	03	04	05
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:
August 10, 2018: Issued initial notification.
December 21, 2018: Issued final notification. Attached the qualification report. Provided estimated first ship date to be on January 21, 2019.
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-08VONE361_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.

GBNG-08VONE361 - CCB 3450 and 3450.001 Final Notice: Qualification of GTBF as a new assembly site in selected products of 6um, 0.6um AMI, 0.6um TSMC, 42K, 130K,133K, and BIC1 Supertex wafer technologies available in 3L and 5L TO-220 packages.

Affected Catalog Part Numbers(CPN)

CL220N5-G
LR645N5-G
MCP1825S-0802E/AB
MCP1825S-1202E/AB
MCP1825S-1802E/AB
MCP1825S-2502E/AB
MCP1825S-3002E/AB
MCP1825S-3302E/AB
MCP1825S-5002E/AB
MCP1826S-0802E/AB
MCP1826S-1202E/AB
MCP1826S-1802E/AB
MCP1826S-2502E/AB
MCP1826S-3002E/AB
MCP1826S-3302E/AB
MCP1826S-5002E/AB
MCP1827S-0802E/AB
MCP1827S-1002E/AB
MCP1827S-1202E/AB
MCP1827S-1802E/AB
MCP1827S-2502E/AB
MCP1827S-3002E/AB
MCP1827S-3302E/AB
MCP1827S-5002E/AB
TC1262-2.5VAB
TC1262-2.8VAB
TC1262-3.0VAB
TC1262-3.3VAB
TC1262-5.0VAB
TC1264-1.8VAB
TC1264-2.5VAB
TC1264-3.0VAB
TC1264-3.3VAB
MCP1406-E/AT
MCP1407-E/AT
MCP1825-0802E/AT
MCP1825-1202E/AT
MCP1825-1802E/AT
MCP1825-2502E/AT
MCP1825-3002E/AT
MCP1825-3302E/AT
MCP1825-5002E/AT
MCP1825-ADJE/AT
MCP1826-0802E/AT
MCP1826-1202E/AT
MCP1826-1802E/AT
MCP1826-2502E/AT
MCP1826-3002E/AT
MCP1826-3302E/AT
MCP1826-5002E/AT
MCP1826-ADJE/AT
MCP1827-0802E/AT
MCP1827-1002E/AT
MCP1827-1202E/AT
MCP1827-1802E/AT
MCP1827-2502E/AT
MCP1827-3002E/AT
MCP1827-3302E/AT
MCP1827-5002E/AT
MCP1827-ADJE/AT
TC1263-2.5VAT
TC1263-2.8VAT
TC1263-3.0VAT
TC1263-3.3VAT
TC1263-5.0VAT

TC1265-1.8VAT
TC1265-2.5VAT
TC1265-3.0VAT
TC1265-3.3VAT
TC4420CAT
TC4420EAT
TC4420VAT
TC4421AVAT
TC4421CAT
TC4421EAT
TC4421VAT
TC4422AVAT
TC4422CAT
TC4422EAT
TC4422VAT
TC4429CAT
TC4429VAT
TC4451VAT
TC4452VAT
TC622EAT
TC622VAT
TC74A0-3.3VAT
TC74A0-5.0VAT
TC74A1-3.3VAT
TC74A1-5.0VAT
TC74A2-3.3VAT
TC74A2-5.0VAT
TC74A3-3.3VAT
TC74A3-5.0VAT
TC74A4-3.3VAT
TC74A4-5.0VAT
TC74A5-3.3VAT
TC74A5-5.0VAT
TC74A6-3.3VAT
TC74A6-5.0VAT
TC74A7-3.3VAT
TC74A7-5.0VAT

QUALIFICATION REPORT SUMMARY

RELIABILITY LABORATORY

PCN #: GBNG-08VONE361

Date:
November 14, 2018

Qualification of GTBF as a new assembly site in selected products of 6um, 0.6um AMI, 0.6um TSMC, 42K, 130K,133K, and BIC1 Supertex wafer technologies available in 5L TO-220 package. The selected products available in 3L TO-220 package will qualify by similarity (QBS).

MICROCHIP

PACKAGE QUALIFICATION REPORT

Purpose: Qualification of GTBF as a new assembly site in selected products of 6um, 0.6um AMI, 0.6um TSMC, 42K, 130K,133K, and BIC1 Supertex wafer technologies available in 5L TO-220 package. The selected products available in 3L TO-220 package will qualify by similarity (QBS).

CCB No.	3450 and 3450.001
CN	ES237099
QUAL ID	Q18164 Rev. A
MP CODE	40AG24B8XA00
Part No.	TC4452VAT
Bonding No.	BDM-001883 REV.A
Package	
Type	5L TO-220
Die thickness	15 mils
Die size	83.9 x 146.2 mils
Lead Frame	
Paddle size	266 x 174 mils
Material	LY80
Surface	Spot Ag
Process	Stamped
Lead Lock	Yes
Part Number	A1-T0220-5-1CFAG
Die attach material	
Epoxy	CRM-1800
Wire	Au wire
Mold Compound	EME-G600
Plating Composition	Matte Tin

MICROCHIP

PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
GTBF192000010.000	TMPE217178860.500	18337G3
GTBF192000011.000	TMPE217178860.500	18337GG
GTBF192000014.000	TMPE217178860.500	18337H5

Result [X] Pass [ ] Fail [ ] ____________________

5L TO assembled by GTBF 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 125°C System: TTS	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: + 125°C System: TTS		231(0)	0/231	Pass	77 units / lot
	Bond Strength: Wire Pull (> 4.0 grams) Bond Shear (18.00 grams)		15 (0) 15 (0)	0/15 0/15	Pass Pass	
UNBIASED-HAST	**Stress Condition:** +130°C/85%RH, 96 hrs. System: HAST 6000X	JESD22-A118		231		
	Electrical Test: +25°C System: TTS		231(0)	0/231	Pass	77 units / lot

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:** 12.0 Volts System: HAST 6000X **Electrical Test:** +25°C and 125°C System: TTS	JESD22-A110	231(0)	231 0/231	Pass	77 units / lot
High Temperature Storage Life	**Stress Condition:** Bake 175°C, 504 hrs System: SHEL LAB **Electrical Test:** +25°C and 125°C System: TTS	JESD22-A103	45(0)	45 0/45	Pass	45 units
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	JESD22B-102E	22 (0)	22 22 0/22	Pass	
Bond Strength **Data Assembly**	Wire Pull (> 4.0 grams)	M2011	30 (0) Wires	0/30	Pass	
	Bond Shear (18.00 grams)	JESD22-B116	30 (0) bonds	0/30	Pass	