Product Change Notification - GBNG-28HRUQ041

Date: 12 Apr 2017

Product Category: Power Management - System Supervisors/Voltage Detectors; Voltage References

Notification subject: CCB 2840 Initial Notice: Qualification of JCET as an additional assembly site for selected products of the 120K wafer technology available in 3L SOT-23 package using CuPdAu bond wire.

Notification text:

PCN Status:
Initial notification.

Microchip Parts Affected:
Please open the attachments found in the attachments field below labeled as PCN_#_Affected_CPN.

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

Description of Change:
Qualification of JCET as an additional assembly site for selected products of the 120K wafer technology available in 3L SOT-23 package using palladium coated copper with gold flash (CuPdAu) bond wire.

Pre Change:
Assembled at MTAI, ATES, NSEB or UNIS using gold (Au) bond wire and G600 molding compound material

Post Change:
Assembled at MTAI, ATES, NSEB and UNIS using gold (Au) bond wire and G600 molding compound material or assembled at JCET using palladium coated copper with gold flash (CuPdAu) bond wire and ELER-8-100HFE molding compound material.

Pre and Post Change Summary:

	Pre Change				Post Change				
Assembly Site	MTAI	ATES	NSEB	UNIS	MTAI	ATES	NSEB	UNIS	*JCET*
Paddle size	64x38	64x38	72x40	57x35	64x38	64x38	72x40	57x35	*75x42*
Lead frame material	CDA194	CDA194	CDA194	CDA194	CDA194	CDA194	CDA194	CDA194	*CDA194*
Wire material	Au	Au	Au	Au	Au	Au	Au	Au	*CuPdAu*
Die attach material	8390A	84-1 LMISR4	84-1 LMISR4	84-1 LMISR4	8390A	84-1 LMISR4	84-1 LMISR4	84-1 LMISR4	*84-1 LMISR4*
Mold compound material	G600	G600	G600	G600	G600	G600	G600	G600	*ELER-8-100HFE*

Impacts to Data Sheet:
None

Change Impact:
None

Reason for Change:
To improve productivity by qualifying JCET as an additional assembly site.

Change Implementation Status:
In Progress

Estimated Qualification Completion Date:
June 2017

Note: Please be advised the qualification completion times may be extended because of unforeseen business conditions however implementation will not occur until after qualification has completed and a final PCN has been issued. The final PCN will include the qualification report and estimated first ship date. Also note that after the estimated first ship date guided in the final PCN customers may receive pre and post change parts.

Time Table Summary:

	April 2017				**-->**	**June 2017**			
Workweek	14	15	16	17		23	24	25	26
Initial PCN Issue Date		X							
Qual Report Availability									X
Final PCN Issue Date									X

Method to Identify Change:
Traceability code

Qualification Plan:
Please open the attachments included with this PCN labeled as PCN_#_Qual Plan.

Revision History:
April 12, 2017: Issued initial notification.

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-28HRUQ041_ Qual Plan.pdf
PCN_GBNG-28HRUQ041_ Affected CPN.pdf
PCN_GBNG-28HRUQ041_Affected CPN.xlsx

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

Terms and Conditions:

If you wish to change your product/process change notification (PCN) profile please log on to our website at http://www.microchip.com/PCN sign into myMICROCHIP to open the myMICROCHIP home page, then select a profile option from the left navigation bar.

To opt out of future offer or information emails (other than product change notification emails), click here to go to microchipDIRECT and login, then click on the "My account" link, click on "Update profile" and un-check the box that states "Future offers or information about Microchip's products or services."

GBNG-28HRUQ041 - CCB 2840 Initial Notice: Qualification of JCET as an additional assembly site for selected products of the 120K wafer technology available in 3L SOT-23 package using CuPdAu bond wire.

Affected Catalog Part Numbers (CPN)

PCN_GBNG-28HRUQ041
Catalog Part Numbers
MCP100T-270I/TT
MCP100T-270I/TTAAA
MCP100T-300I/TT
MCP100T-315I/TT
MCP100T-450I/TT
MCP100T-460I/TT
MCP100T-475I/TT
MCP100T-485I/TT
MCP101T-270I/TT
MCP101T-300I/TT
MCP101T-315I/TT
MCP101T-450I/TT
MCP101T-460I/TT
MCP101T-475I/TT
MCP101T-485I/TT
MCP102T-195I/TT
MCP102T-195I/TTV01
MCP102T-240E/TT
MCP102T-270E/TT
MCP102T-300E/TT
MCP102T-315E/TT
MCP102T-450E/TT
MCP102T-475E/TT
MCP120T-270I/TT
MCP120T-300I/TT
MCP120T-315I/TT
MCP120T-450I/TT
MCP120T-450I/TTS01
MCP120T-460I/TT
MCP120T-475I/TT
MCP120T-485I/TT
MCP121T-195I/TT
MCP121T-240E/TT
MCP121T-270E/TT
MCP121T-300E/TT
MCP121T-315E/TT
MCP121T-315E/TTAAA
MCP121T-416E/TT
MCP121T-450E/TT
MCP121T-475E/TT
MCP130T-270I/TT
MCP130T-300I/TT
MCP130T-315I/TT

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Affected Catalog Part Numbers (CPN)

MCP130T-450I/TT
MCP130T-450I/TTV02
MCP130T-460I/TT
MCP130T-475I/TT
MCP130T-485I/TT
MCP131T-195I/TT
MCP131T-240E/TT
MCP131T-250E/TT
MCP131T-270E/TT
MCP131T-300E/TT
MCP131T-315E/TT
MCP131T-450E/TT
MCP131T-475E/TT
MCP1525T-I/TT
MCP1541T-I/TT

QUALIFICATION PLAN SUMAMRY

PCN #: GBNG-28HRUQ041

Date:
March 14, 2017

Qualification of JCET as an additional assembly site for selected products of the 120K wafer technology available in 3L SOT-23 package using palladium coated copper with gold flash (CuPdAu) bond wire.

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Purpose: Qualification of JCET as an additional assembly site for selected products of the 120K wafer technology available in 3L SOT-23 package using palladium coated copper with gold flash (CuPdAu) bond wire.

CCB No: ________________2840

MP code: ________________A7BQ1TC6XA00

Part No.: ________________ MCP1525T-I/TT

BD No: __________________ BDM -001277 Rev.B

Package:

Type __________________ 3L SOT23

Die thickness: __________ 8 mils

Die size: _______________ 47.4 x 25.0 mil

MSL: __________________ MSL1 @260C

Lead frame:

Paddle size: ____________ 75x42 mils

Material ________________ A194

Plating _________________ Spot Ag

Surface Treatment ______ None

Process ________________ Stamped

Leadlock _______________ No

Wire:

Material ________________ CuPdAu

Die Attach Epoxy:

Part Number ____________ 84-1 LMISR4

Conductive _____________ Yes

Mold Compound:

Part Number ____________ ELER-8-100HFE

Lead finish: _______________Matte Tin

Test Name	Conditions	Sample Size	Min. Qty of Spares per Lot (should be properly marked)	Qty of Lots	Total Units	Fail Accept Qty	Est. Dur. Days	Special Instructions
Standard Pb-free Solderability	JESD22B-102E; Perform 8 hour steam aging for Matte tin finish and 1 hour steam aging for NiPdAu finish prior to testing. Standard Pb-free: Matte tin/ NiPdAu finish, SAC solder, wetting temp 245°C for both SMD & through hole packages.	22	5	1	27	> 95% lead coverage	5	Standard Pb-free solderability is the requirement. SnPb solderability (backward solderability- SMD reflow soldering) is required for any plating related changes and highly recommended for other package BOM changes.
Wire Bond Pull - WBP	Mil. Std. 883-2011	5	0	3	24	0 fails after TC	5	30 bonds from a minimum of 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	5	0	3	24		5	30 bonds from a minimum of 5 devices.
Physical Dimensions	Measure per JESD22 B100 and B108	10	0	3	30	0	5	
External Visual	Mil. Std. 883-2009/2010	All devices prior to submission for qualification testing	0	3	ALL	0	5	
HTSL (High Temp Storage Life)	+175 C for 504 hours or 150°C for 1008 hrs. Electrical test pre and post stress at +25°C and hot temp 85ºC	45	5	1	50	0	10	Must be in progress at time of package release to production, but completion is not required for release to production.
Preconditioning Engineering Evaluation at MSL1@260C	Required JCET to perform SAM analysis before and after Preconditioning MSL-1@260C by using the assemble engineering sample 100 units +150°C Bake for 24 hours, moisture loading requirements per MSL level + 3X reflow at peak reflow temperature per Jedec-STD-020D for package type; Electrical test pre and post stress at +25°C.	100	0	1	100	0	15	Update evaluation result to Microchip for approval before starting assembly the qualification lot.

Test Name	Conditions	Sample Size	Min. Qty of Spares per Lot (should be properly marked)	Qty of Lots	Total Units	Fail Accept Qty	Est. Dur. Days	Special Instructions
Preconditioning - Required for surface mount devices	+150°C Bake for 24 hours, moisture loading requirements per MSL level + 3X reflow at peak reflow temperature per Jedec-STD-020D for package type; Electrical test pre and post stress at +25°C. MSL1 @ 260°C	231	15	3	738	0	15	Spares should be properly identified. 77 parts from each lot to be used for HAST, Autoclave, Temp Cycle test.
HAST	+130°C/85% RH for 96 hours. Electrical test pre and post stress at +25°C and hot temp 85ºC	77	5	3	246	0	10	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
Unbiased HAST	+130°C/85% RH for 96 hrs. Electrical test pre and post stress at +25°C	77	5	3	246	0	10	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
Temp Cycle	-65°C to +150°C for 500 cycles. Electrical test pre and post stress at hot temp 85ºC; 3 gram force WBP, on 5 devices from 1 lot, test following Temp Cycle stress.	77	5	3	246	0	15	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.