



Product Change Notification - KSRA-23ENWX184

Date:

26 Apr 2019

Product Category:

Computing Embedded Controllers; Others

Affected CPNs:**Notification subject:**

CCB 3780 Initial Notice: Qualification of MMT as an additional assembly site for selected products of the 65nm GF wafer technology available in 128L TQFP (14x14x1mm) package using CuPdAu bond wire.

Notification text:**PCN Status:**

Initial 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).

Description of Change:

Qualification of MMT as an additional assembly site for selected products of the 65nm GF wafer technology available in 128L TQFP (14x14x1mm) package using CuPdAu bond wire.

Pre Change:

Assembled at using palladium coated copper (PdCu) bond wire, 1076WA die attach, and G631H molding compound material.

Post Change:

Assembled at using palladium coated copper (PdCu) bond wire, 1076WA die attach, and G631H molding compound material. Assembled at using palladium coated copper with gold flash (CuPdAu) bond wire, 3280 die attach, and G700HA molding compound material.

Pre and Post Change Summary:

	Pre Change	Post Change	
Assembly Site	ASE Inc. / ASE	ASE Inc. / ASE	Microchip (Branch) / MMT
Wire material			
Die attach material	1076WA	1076WA	3280
Molding compound material	G631H	G631H	G700HA
Lead frame material	C7025	C7025	C7025

Impacts to Data Sheet:

None

Change Impact:

None

Reason for Change:

To improve on-time delivery performance by qualifying MMT as an additional assembly site.

Change Implementation Status:

In Progress

Estimated Qualification Completion Date:

June 2019



Note: Please be advised the qualification completion times may be extended because of unforeseen business 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 . 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:

Workweek	April 2019					-->	June 2019				
	14	15	16	17	18		23	24	25	26	27
Initial PCN Issue Date				X							
Report Availability										X	
Final PCN Issue Date										X	

Method to Identify Change:

code

Qualification Plan:

Please open the attachments included with this PCN labeled as PCN_#_Qual_Plan.

Revision History:

April 26, 2019: 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_KSRA-23ENWX184_Qual_Plan.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)

MEC1322I-NU-C0

MEC1322-NU

MEC1322-NU-C0

MEC1324-NU

MEC1404-NU

MEC1404-NU-D0

MEC1406-NU

MEC1406-NU-D0

MEC1408-NU

MEC1414-I/NU

MEC1414-NU

MEC1416-I/NU

MEC1416-NU

MEC1416-NU-D0

MEC1418-I/NU

MEC1418-NU

MEC1418-NU-D0

MEC1428-I/NU-C1

MEC1428-NU-C1



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QUALIFICATION PLAN SUMMARY

PCN#: KSRA-23ENWX184

**Date:
April 04, 2019**

Qualification of MMT as an additional assembly site for selected products of the 65nm GF wafer technology available in 128L TQFP (14x14x1mm) package using CuPdAu bond any topic powire.

Purpose: Qualification of MMT as an additional assembly site for selected products of the 65nm GF wafer technology available in 128L TQFP (14x14x1mm) package using CuPdAu bond wire.

Misc.	Assembly site	MMT
	BD Number	BDM-002091/B
	MP Code (MPC)	SG0021Z2XGDC
	Part Number (CPN)	MEC1416-NU-D0
	CCB No.	3780
Lead-Frame	Paddle size	190x190 mils
	Material	C7025
	Surface	Double Ag Ring Plated
	Treatment	BOT
	Process	Etched
	Lead-lock	No
	Lead Plating	Matte Tin
	Strip Size	70x250mm
	Strip Density	30 units/strip
Bond Wire	Material	CuPdAu
Die Attach	Part Number	3280
	Conductive	Yes
MC	Part Number	G700HA
PKG	PKG Type	TQFP
	Pin/Ball Count	128
	PKG width/size	14x14x1mm
Die	Die Thickness	7 mils
	Die Size	104.5x102.5 mils
	Fab Process (site)	65nm/GF

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	Test Site	Special Instructions
Standard Pb-free Solderability	J-STD-002 ; 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	MTAI	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.
Backward Solderability	J-STD-002 ;Perform 8 hours steam aging for Matte tin finish and 1 hour steam aging for NiPdAu finish prior to testing. ackward: Matte tin/ NiPdAu finish, SnPb solder, wetting temp 215°C for SMD.	22	5	1	27	> 95% lead coverage	5	MTAI	
Wire Bond Pull - WBP	Mil. Std. 883-2011	5	0	3	15	0 fails after TC	5	MMT/MTAI	30 bonds from a minimum of 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	5	0	3	15		5	MMT/MTAI	30 bonds from a minimum of 5 devices.
Wire Sweep		5	0	3	15	0		MMT	Required for any reduction in wire bond thickness.
Physical Dimensions	Measure per JESD22 B100 and B108	10	0	3	30	0	5	MMT	
External Visual	Mil. Std. 883-2009/2010	All devices prior to submission for qualification testing	0	3	ALL	0	5	MMT/ MTAI	
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-020E for package type; Electrical test pre and post stress at +25°C. MSL1/MSL3 @ 260°C	231	15	3	738	0	15	MTAI	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.	77	5	3	246	0	10	MTAI	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	MTAI	Spares should be properly identified. Use the parts which have gone through Pre-conditioning