Product Change Notification - JAON-30NGXA111

Date:

31 Jan 2020

Product Category:

Interface- Controller Area Network (CAN); Interface- LIN Transceiver

Affected CPNs:

Notification subject:

CCB 4036 and 4036.001 Initial Notice: Qualification of MTAI as an additional assembly site for selected Atmel products of the 77k wafer technology available in 8L and 14L SOIC packages.

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 .xls).

Description of Change:

Qualification of MTAI as an additional assembly site for selected Atmel products of the 77k wafer technology available in 8L and 14L SOIC packages.

Pre Change:

For 14L SOIC package: Assembled at ASSH assembly site using EN-4900GC die attach and G700 mold compound material.

For 8L SOIC package: Assembled at ANAP assembly site using 8290 die attach and G700 mold compound material.

Post Change:

For 14L SOIC package: Assembled at ASSH assembly site using EN-4900GC die attach and G700 mold compound material or assembled at MTAI using 8390A die attach and G600V mold compound material.

For 8L SOIC package: Assembled at ANAP assembly site using 8290 die attach and G700 mold compound material or assembled at MTAI using 8390A die attach and G600V mold compound material.

Pre and Post Change Summary:

For 14L SOIC Package:

	Pre Change	Post Change	
Assembly Site	ASE-Shanghai (ASSH)	ASE-Shanghai (ASSH)	Microchip Technology Thailand (HQ) (MTAI)
Wire material	CuPdAu	CuPdAu	CuPdAu
Die attach material	EN-4900GC	EN-4900GC	8390A
Molding compound material	G700	G700	G600V
Lead frame material	CDA194	CDA194	CDA194
Lead Plating	NiPd-AgPd	NiPd-AgPd	Matte Tin

For 8L SOIC Package:

	Pre Change	Post Change	
Assembly Site	Amkor Technology Philippine (ANAP)	Amkor Technology Philippine (ANAP)	Microchip Technology Thailand (HQ) (MTAI)
Wire material	CuPdAu	CuPdAu	CuPdAu
Die attach material	8290	8290	8390A
Molding compound material	G700	G700	G600V
Lead frame material	CDA194	CDA194	CDA194
Lead Plating	NiPd-AgPd	NiPd-AgPd	Matte Tin

Impacts to Data Sheet:
None
Change Impact:
None
Reason for Change:
To improve on-time delivery performance by qualifying MTAI as an additional assembly site.
Change Implementation Status:
In Progress
Estimated Qualification Completion Date:
August 2020
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:

	January 2020					->	August 2020				
Workweek	01	02	03	04	05		32	33	34	35	36
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:
January 31, 2020: 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_JAON-30NGXA111_Qual_Plan.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.

Affected Catalog Part Numbers (CPN)

ATA663211-GAQW
ATA663254-GAQW
ATA663254-GAQW-VAO
ATA6562-GAQW0
ATA6566-GAQW0
ATA6563-GAQW0
ATA6564-GAQW0
ATA6562-GAQW1
ATA6561-GAQW
ATA6560-GAQW
ATA6564-GAQW1
ATA6563-GAQW1
ATA6566-GAQW1
ATA6560-GAQW-N
ATA6561-GAQW-N
ATA6560-GAQW-VAO
ATA6625-GAQW
ATA6570-GNQW0
ATA6570-GNQW1

QUALIFICATION PLAN SUMMARY

PCN #: JAON-30NGXA111

Date
November 5, 2019

Qualification of MTAI as an additional assembly site for selected Atmel products of the 77k wafer technology available in 14L SOIC package. The selected Atmel products of the 77k wafer technology available in 8L SOIC package will qualify by similarity (QBS). This is an automotive AEC-Q006 qualification.

Purpose: Qualification of MTAI as an additional assembly site for selected Atmel products of the 77k wafer technology available in 14L SOIC package. The selected Atmel products of the 77k wafer technology available in 8L SOIC package will qualify by similarity (QBS). This is an automotive AEC-Q006 qualification.

CCB No.: 4036 and 4036.001

Misc.	Assembly site	MTAI
	BD Number	BDM-002272
	MP Code (MPC)	77A09JD3XVA1
	Part Number (CPN)	ATA6565-GNQW0-VAO
	MSL information	1
	Assembly Shipping Media (T/R, Tube/Tray)	T&R
	Base Quantity Multiple (BQM)	4000
Lead-Frame	Paddle size	155 x 95 mil
	Material	CDA194
	DAP Surface Prep	Selective Ag plating
	Treatment	Rough Cu
	Process	stamp
	Lead-lock	No
	Lead Plating	Matte tin
	Strip Size	2.756 x 9.8431 inch
	Strip Density	112units / strip
Bond Wire	Material	CuPdAu
Die Attach	Part Number	8390A
	Conductive	yes
MC	Part Number	G600V
PKG	PKG Type	SOIC
	Pin/Ball Count	14
	PKG width/size	150mil

Test Name	Conditions	Reliability Stress Read Point Grade 0: -40°C to +150°C (MCHP H Temp) Grade 1: -40°C to +125°C (MCHP E Temp) Grade 2: -40°C to +105°C (MCHP E Temp) Grade 3: -40°C to +85°C (MCHP I Temp)	Pre & Post Reliability Stress Test Temperature Grade 0: -40°C to +150°C (MCHP H Temp) Grade 1: -40°C to +125°C (MCHP E Temp) Grade 2: -40°C to +105°C (MCHP E Temp) Grade 3: -40°C to +85°C (MCHP I Temp)	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	J-STD-002D ; Perform 8 hours of 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.
Backward Solderability	J-STD-002D ; Perform 8 hour steam aging for Matte tin finish and 1 hr steam aging for NiPdAu finish prior to testing. Backward: Matte tin/ NiPdAu finish, SnPb solder, wetting temp 215°C for SMD.			22	5	1	27	>95% lead coverage	5	
Wire Bond Pull - WBP	Mil. Std. 883-2011			5	0	1	5	0 fails after TC	5	30 bonds from a min. 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001			5	0	1	5		5	30 bonds from a min. 5 devices.
Physical Dimensions	Measure per JESD22 B100 and B108			10	0	3	30		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)	JESD22-A103 **+175°C** *2x Stress*	1st Readpoint: **Grade 0: 1000 hrs (+175°C)** 2nd Readpoint: **Grade 0: 2000 hrs (+175°C)**	**Grade 0**: **+25°C**, **+150°C**	45	5	3	150	0	21 - 167	Perform per the requirements in AEC-Q100/Q101. Spares should be properly identified. .
Preconditioning - Required for surface mount devices	J-STD-020 JESD22-A113 +150°C Bake for 24 hours, moisture loading requirements per **MSL level 1**+ 3X reflow at peak reflow temperature per Jedec-STD-020E for package type.		**Grade 0: +25°C**	231	15	3	738	0	15	Spares should be properly identified. 77 parts from each lot to be used for HAST, uHAST, Temp Cycle test.
HAST	JESD22-A101 or A110 **+130°C/85% RH for 96 hrs** *2x Stress*	1st Readpoint: **Grade 0: 96 hrs (+130°C/85% RH)** 2nd Readpoint: **Grade 0: 192 hrs (+130°C/85% RH**)	**Grade 0: +25°C**, **+150°C**	77	5	3	246	0	10 - 22	Perform per the requirements in AEC-Q006. Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
uHAST	JESD22-A102, A118, or A101 **+130°C/85% RH for 96 hrs**	**Grade 0: 96 hrs (+130°C/85% RH)**	**Grade 0: +25°C**	77	5	3	246	0	10	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
Temp Cycle	JESD22-A104 and Appendix 3 -55ºC to +125ºC, **-55ºC to +150ºC** *2x Stress*	1st Readpoint: **Grade 0: 1500 cycles (-55ºC to +150ºC)** 2nd Readpoint: **Grade 0: 3000 cycles (-55ºC to +150ºC)**	**Grade 0: +150°C**	77	5	3	246	0	15 - 120	Perform per the requirements in AEC-Q006. Spares should be properly identified. Use the parts which have gone through Pre-conditioning.