Product Change Notification / RMES-26BJAP489

Date:

27-May-2021

Product Category:

Memory

PCN Type:

Manufacturing Change

Notification Subject:

CCB 4646 Initial Notice: Qualification of MMT as an additional assembly site for various Atmel products available in 8L UDFN (2x3x0.6mm) package.

Affected CPNs:

RMES-26BJAP489_Affected_CPN_05272021.pdf
RMES-26BJAP489_Affected_CPN_05272021.csv

Notification Text:

PCN Status: Initial notification

PCN Type: Manufacturing Change

Microchip Parts Affected: Please open one of the files 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 an additional assembly site for various Atmel products available in 8L UDFN (2x3x0.6mm) package.

Pre and Post Change Summary:

	Pre Change	Post Change

Assembly Site	ASE Inc. (ASE)	Amkor Technology Philippines (P3/P4), INC. (ATP7)	ASE Inc. (ASE)	Amkor Technology Philippines (P3/P4), INC. (ATP7)	Microchip Technology Thailand - Branch (MMT)
Wire material	CuPd / CuPdAu	Au / CuPd	CuPd / CuPdAu	Au / CuPd	CuPdAu
Die attach material	EN-4900G	AMK-06 CRM-1085A	EN-4900G	AMK-06 CRM-1085A	8600
Molding compound material	G631H	G700Y	G631H	G700Y	G700LTD
Lead frame material	C7025	C7025	C7025	C7025	EFTEC-64T
DAP Surface Prep	PPF spot	PPF	PPF spot	PPF	PPF
Paddle size	73 x 67 mils	79 x 67 mils	73 x 67 mils	79 x 67 mils	79 x 67 mils

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: August 2021

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:

	May 2021					**>**	**August 2021**				
Workweek	18	19	20	21	22		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:May 27, 2021: 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.

Attachments:

PCN_RMES-26BJAP489_Pre and Post Change_Summary.pdf
PCN_RMES-26BJAP489_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.

QUALIFICATION PLAN SUMMARY

PCN #: RMES-26BJAP489

Date:
April 09, 2021

Qualification of MMT as an additional assembly site for various Atmel products available in 8L UDFN (2x3x0.6mm) package. This is an Automotive Q006 Grade 1 qualification.

Purpose: **Qualification of MMT as an additional assembly site for various Atmel products available in 8L UDFN (2x3x0.6mm) package. This is an Automotive Q006 Grade 1 qualification.**

MP code: 358A2TQ4BC04

Part No.: AT25256B (Qual vehicle)

BD No: BDE006748-01

CCB No. 4646

Package:

Type 8 UDFN

Width or Size 2 x 3 x 0.6 mm

Leadframe:

Material EFTEC-64T

Plating PPF

Part Number 10100856

Surface treatment ME2

Paddle size 79 x 67 mils

Process Etched

Solder Plating:

Material NiPdAu

Wire:

Material CuPdAu

Die Attach Film:

Part Number 8600

Conductive Yes

Mold Compound:

Type G700LTD

Test Name	Conditions	Reliability Stress Read Point Grade 1: -40°C to +125°C (MCHP E Temp)	Pre & Post Reliability Stress Test Temperature Grade 1: -40°C to +125°C (MCHP E 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.
Wire Bond Pull - WBP	Mil. Std. 883-2011			3	0	3	Pull/shear as many as is possible per the number of wires per device to be qualified up to a maximum of 30 wires/balls from the total sample size specified.	0 fails after TC	5	
Wire Bond Shear - WBS	CDF-AEC-Q100-001			3	0	3	Pull/shear as many as is possible per the number of wires per device to be qualified up to a maximum of 30 wires/balls from the total sample size specified.	**0**	5	
Physical Dimensions	Measure per JESD22 B100 and B108			10	0	3	30	**0**	5	

Test Name	Conditions	Reliability Stress Read Point Grade 1: -40°C to +125°C (MCHP E Temp)	Pre & Post Reliability Stress Test Temperature Grade 1: -40°C to +125°C (MCHP E 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
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 **+125, +150°C** or +175°C 2x Stress	**1st Read point:** **Grade 1: 500 hrs (+175°C) or 1000 hrs (150°C)** **2nd Read point:** **Grade 1: 1000 hrs (+175°C) or 2000 hrs (150°C)**	**Grade 1: +25°C, +85°C, +125°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 + 3X reflow at peak reflow temperature per Jedec-STD-020E for package type. **MSL 1 @ 260 C**		**Grade 1: +25°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	**JESD22-A101 or A110** +130°C/85% RH for 96 hrs or +110°C/85%RH for 264 hrs 2x Stress	**1st Readpoint:** **Grade 1: 96 hrs (+130°C/85% RH) or 264 hrs (+110°C/85%RH)** **2nd Readpoint:** **Grade 1: 192 hrs (+130°C/85% RH) or 528 hrs (+110°C/85%RH)**	**Grade 1: +25°C, +85°C, +125°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.

Test Name	Conditions	Reliability Stress Read Point Grade 1: -40°C to +125°C (MCHP E Temp)	Pre & Post Reliability Stress Test Temperature Grade 1: -40°C to +125°C (MCHP E 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
uHAST	**JESD22-A102, A118, or A101** +130°C/85% RH for 96 hrs or **+110°C/85% RH for 264 hrs**	**Grade 1: 96 hrs (+130°C/85% RH) or 264 hrs (+110°C/85% RH))**	**Grade 1: +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 or -65°C to +150°C** **2x Stress**	**<u>1st Readpoint:</u>** **Grade 1: 1000 cycles (-55ºC to +150ºC) or 500 cycles (-65ºC to 150ºC)** **<u>2nd Readpoint:</u>** **Grade 1: 2000 cycles (-55ºC to +150ºC) or 1000 cycles (-65ºC to 150ºC)**	**Grade 1: +85°C, +125°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

CCB 4646
Pre and Post Change Summary
PCN #: RMES-26BJAP489

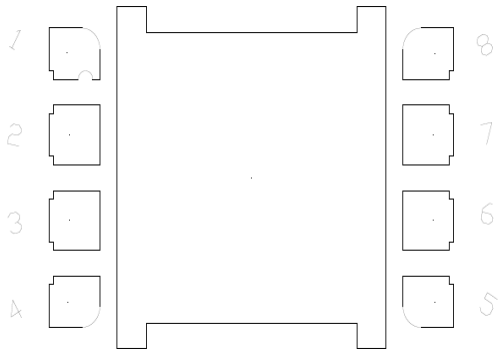
A Leading Provider of Smart, Connected and Secure Embedded Control Solutions

SMART | CONNECTED | SECURE

Qualification of MMT as an additional assembly site for various Atmel products available in 8L UDFN (2x3x0.6mm) package.

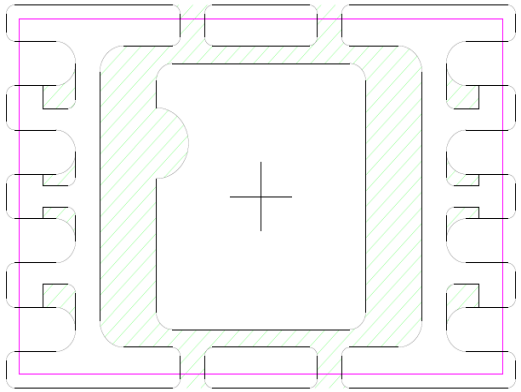
LEAD FRAME COMPARISON

ASE



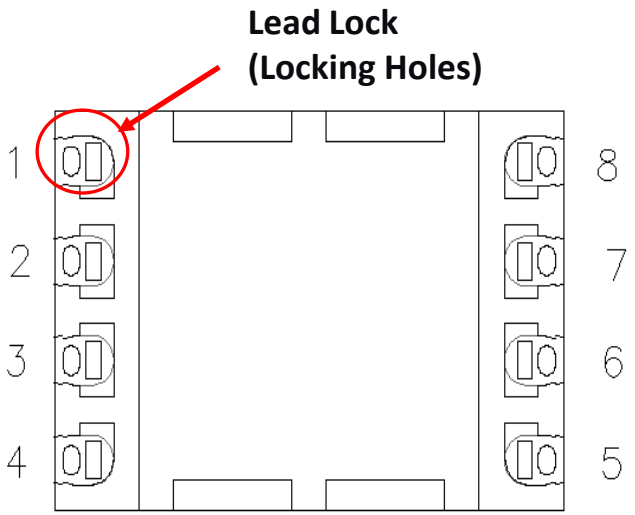
Lead Frame Material	C7025
Lead Lock	Yes
Paddle size	73 x 67 mils

ATP 7



Lead Frame Material	C7025
Lead Lock	Yes
Paddle size	79 x 67 mils

MMT



Lead Frame Material	EFTEC-64T
Lead Lock (Locking Hole)	Yes
Paddle size	79 x 67 mils

NOTE: Mold compound material fills the lead lock hole, which provides improved protection against moisture penetration along the edge of the leads (pins) of the package.

MICROCHIP

Affected Catalog Part Numbers (CPN)

AT25040B-MAHL-E
AT25040B-MAHL-T
AT25020B-MAHL-E
AT25020B-MAHL-T
AT25010B-MAHL-E
AT25010B-MAHL-T
AT24MAC402-MAHM-T
AT24MAC602-MAHM-T
AT34C02D-MAHM-E
AT34C02D-MAHMHL-T
AT34C02D-MAHM-T
AT24C04C-MAHM-E
AT24C04C-MAHM-T
AT24CS04-MAHM-E
AT24CS04-MAHM-T
AT24C08C-MAHM-E
AT24C08C-MAHM-T
AT24CS08-MAHM-E
AT24CS08-MAHM-T
AT24C01C-MAHM-E
AT24C01C-MAHM-T
AT24CS01-MAHM-T
AT24C02C-MAHM-E
AT24C02C-MAHM-T
AT24CS02-MAHM-T
AT24C256C-MAHL-E
AT24C256C-MAHL-T
AT24C16C-MAHM-E
AT24C16C-MAHM-T
AT24CS16-MAHM-E
AT24CS16-MAHM-T
AT24C64D-MAHM-E
AT24C64D-MAHM-T
AT24CS64-MAHM-T
AT24C128C-MAHM-E
AT24C128C-MAHM-T
AT24C32D-MAHM-E
AT24C32D-MAHM-T
AT24CS32-MAHM-E
AT24CS32-MAHM-T
AT25128B-MAHL-E
AT25128B-MAHL-T
AT25256B-MAHL-E
AT25256B-MAHL-T
AT25080B-MAHL-E
AT25080B-MAHL-T

AT25160B-MAHL-E
AT25160B-MAHL-T
AT25320B-MAHL-E
AT25320B-MAHL-T
AT25640B-MAHL-E
AT25640B-MAHL-T
AT93C56B-MAHM-T
AT93C56B-MAHM-E
AT93C66B-MAHM-E
AT93C66B-MAHM-T
AT24C01D-MAHM-E
AT24C01D-MAHM-T
AT24C02D-MAHM-E
AT24C02D-MAHM-T
AT24C04D-MAHM-E
AT24C04D-MAHM-T
AT24C08D-MAHM-E
AT24C08D-MAHM-T
AT24C16D-MAHM-E
AT24C16D-MAHM-T
AT24C32E-MAHM-T
AT21CS01-MAHMJF-E
AT34C04-MA5M-E
AT34C04-MA5M-T
AT93C86AY6-10YH-1.8-T
AT93C46DY6-YH-E
AT93C46DY6-YH-T
AT24C16C-MAHDHP-T
24FC01T-E/MUY
24FC01T-I/MUY
24FC04T-I/MUY
24FC16T-I/MUY