



## Product Change Notification / RMES-26BJAP489

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**Date:**

04-Feb-2022

**Product Category:**

Memory

**PCN Type:**

Manufacturing Change

**Notification Subject:**

CCB 4646 Final 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\\_02042022.pdf](#)  
[RMES-26BJAP489\\_Affected\\_CPN\\_02042022.csv](#)

**Notification Text:**

**PCN Status:**Final 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		
<b>Assembly Site</b>	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)
<b>Wire material</b>	CuPd / CuPdAu	Au / CuPd	CuPd / CuPdAu	Au / CuPd	CuPdAu
<b>Die attach material</b>	EN-4900G	AMK-06 CRM-1085A	EN-4900G	AMK-06 CRM-1085A	8600
<b>Molding compound material</b>	G631H	G700Y	G631H	G700Y	G700LTD
<b>Lead frame material</b>	C7025	C7025	C7025	C7025	EFTEC-64T
<b>DAP Surface Prep</b>	PPF spot	PPF	PPF spot	PPF	PPF
<b>Paddle size</b>	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 First Ship Date:**February 17, 2022 (date code: 2208)

Note: Please be advised that after the estimated first ship date customers may receive pre and post change parts.

**Time Table Summary:**

	May 2021					February 2022				
Workweek	1 9	2 0	2 1	2 2	2 3	06	07	08	09	10
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:**May 27, 2021: Issued initial notification.**February 04, 2022:** Issued final notification. Attached the qualification report and updated the timetable summary. Provided estimated first ship date to be on February 17, 2022.

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 Report.pdf](#)

Please contact your local [Microchip sales office](#) with questions or concerns regarding this notification.

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**MICROCHIP**

**QUALIFICATION REPORT SUMMARY**  
RELIABILITY LABORATORY

**PCN #: RMES-26BJAP489**

**Date:**  
**January 5, 2022**

**Qualification of MMT as an additional assembly site for Atmel  
AT24CS02-MAHM-T, AT24C64D-MAHM-T and AT93C56B-  
MAHM-T catalog part numbers (CPN) available in 8L UDFN  
(2x3x0.6mm) package.**



## **MICROCHIP**

### **PACKAGE QUALIFICATION REPORT**

<b>Purpose</b>	Qualification of MMT as an additional assembly site for Atmel AT24CS02-MAHM-T, AT24C64D-MAHM-T and AT93C56B-MAHM-T catalog part numbers (CPN) available in 8L UDFN (2x3x0.6mm) package.
<b>CN</b>	ES356727
<b>QUAL ID</b>	R2100882 Rev A
<b>MP CODE</b>	358A2TQ4BC04
<b>Part No.</b>	AT25256B-MAHL-T
<b>Bonding No.</b>	BDE-006748 Rev. 01
<b>CCB</b>	4646
<b><u>Package</u></b>	
<b>Type</b>	8L UDFN
<b>Package size</b>	2 x 3 x 0.6 mm
<b><u>Lead Frame</u></b>	
<b>Paddle size</b>	79 x 67 mils
<b>Material</b>	EFTEC-64T
<b>Surface</b>	ME2
<b>Process</b>	Etched
<b>Lead Lock</b>	Yes
<b>Part Number</b>	10100856
<b><u>Material</u></b>	
<b>Epoxy</b>	8600
<b>Wire</b>	CuPdAu wire
<b>Mold Compound</b>	G700LTD
<b>Plating Composition</b>	NiPdAu



# MICROCHIP PACKAGE QUALIFICATION REPORT

## Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
MMT-220602564.000	MCSO917225494.D00	2118EKU
MMT-220602563.000	MCSO917225494.D00	2118BQJ
MMT-220602565.000	MCSO917225494.D00	2118H50

### Result

Pass

Fail

8L UDFN (2x3x0.6 mm) assembled by MMT pass reliability test per QCI-39000. This package was qualified the Moisture/Reflow Sensitivity Classification Level 1 at 260°C reflow temperature per IPC/JEDEC J-STD-020E standard.

# PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS	Result	Remarks
<b>Moisture/Reflow Sensitivity Classification Test (At MSL Level 1)</b>	85°C/ 85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH 3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243  (IPC/JEDEC J-STD-020E)	IPC/JEDEC J-STD-020E	135	0/135	Pass	
<b><u>Precondition</u> <u>Prior Perform</u> <u>Reliability Tests</u> (At MSL Level 1)</b>	<b>Electrical Test:</b> +25°C, 85°C and 125°C System: NEXTEST_PT  Bake 150°C, 24 hrs System: CHINEE  85°C/85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH  3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243  <b>Electrical Test:</b> +25°C, 85°C and 125°C System: NEXTEST_PT	JESD22A113	693(0)	693  693  693  0/693	Pass	Good Devices

# PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard /Method	Qty. (Acc.)	Def/SS.	Result	Remarks
<b>Temp Cycle</b>	<b>Stress Condition:</b> -65°C to +150°C, 500 Cycles System: TABAI ESPEC TSA-70H <b>Electrical Test:</b> +85°C and 125°C System: NEXTEST_PT	JESD22A 104	231(0)	231  0/231	Pass	Parts had been pre-conditioned at 260°C
	<b>Stress Condition:</b> -65°C to +150°C, 1000 Cycles System: TABAI ESPEC TSA-70H <b>Electrical Test:</b> +85°C and 125°C System: NEXTEST_PT		231(0)	231  0/231	Pass	



# PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
<b>HAST</b>	<b>Stress Condition:</b> +130°C/85%RH, 96 hrs. <b>Bias Volt:</b> 5.0 Volts System: HAST 6000X	JESD22-A110		231		Parts had been pre-conditioned at 260°C
	<b>Electrical Test:</b> +25°C, 85°C and 125°C System: NEXTEST_PT		231(0)	0/231	Pass	
	<b>Stress Condition:</b> +130°C/85%RH, 192 hrs. <b>Bias Volt:</b> 5.0 Volts System: HAST 6000X <b>Electrical Test:</b> +25°C, 85°C and 125°C System: NEXTEST_PT		231(0)	0/231	Pass	

# PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
<b>UNBIASED-HAST</b>	<b>Stress Condition:</b> +130°C/85%RH, 96 hrs. System: HAST 6000X  <b>Electrical Test:</b> +25°C System: NEXTEST_PT	JESD22A118	231(0)	231 0/231	Pass	Parts had been pre-conditioned at 260°C  77 units / lot
<b>High Temperature Storage Life</b>	<b>Stress Condition:</b> Bake 175°C, 500 hrs System: SHEL LAB  <b>Electrical Test:</b> +25°C, 85°C and 125°C System: NEXTEST_PT  <b>Stress Condition:</b> Bake 175°C, 1000 hrs System: SHEL LAB  <b>Electrical Test:</b> +25°C, 85°C and 125°C System: NEXTEST_PT	JESD22A103	135(0)	135 0/135  135 0/135	Pass  Pass	45 units / lot
<b>Solderability Temp 245°C</b>	<b>Steam Aging:</b> Temp 93°C, 8Hrs System: SAS-3000 Solder Dipping: Solder Temp. 245°C Solder material: Pb Free Sn 95.5Ag3.9Cu0.6 System: ERSA RA 2200D Visual Inspection: External Visual Inspection	J-STD-002	22 (0)	22 22 0/22	Pass	

# PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
<b>Physical Dimensions</b>	Physical Dimension, 10 units from 1 lot	JESD22- B100/B108	30(0) Units	0/30	Pass	
<b>Bond Strength Data Assembly</b>	Wire Pull (> 2.50 grams)	Mil. Std. 883-2011	30 (0) Wires	0/30	Pass	
	Bond Shear (> 15.00 grams)	CDF-AECQ100- 001	30 (0) bonds	0/30	Pass	

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



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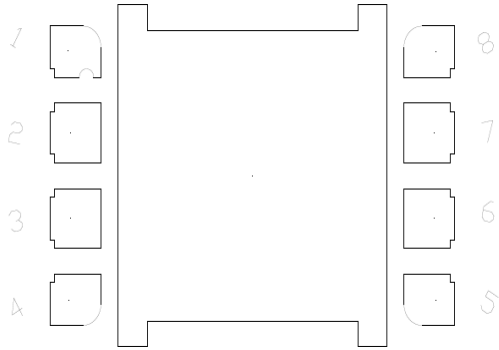
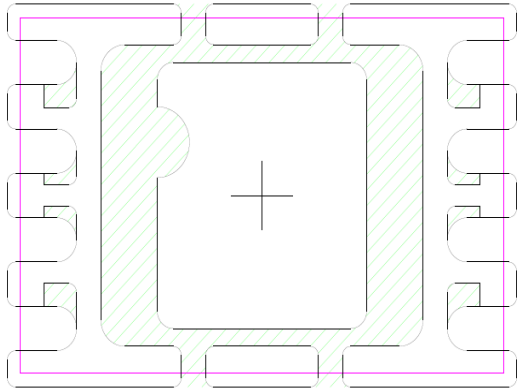
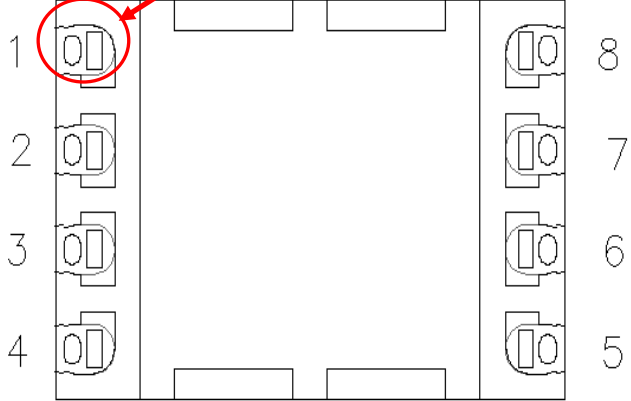
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**Qualification of MMT as an additional assembly site for various Atmel products available in 8L UDFN (2x3x0.6mm) package.**

# LEAD FRAME COMPARISON

ASE		ATP 7		MMT	
				<p>Lead Lock (Locking Holes)</p> 	
Lead Frame Material	C7025	Lead Frame Material	C7025	Lead Frame Material	EFTEC-64T
Lead Lock	Yes	Lead Lock	Yes	Lead Lock (Locking Hole)	Yes
Paddle size	73 x 67 mils	Paddle size	79 x 67 mils	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.

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  
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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