Product Change Notification: CAAN-02HDKP333

Date:

05-Feb-2025

Product Category:

32-Bit Microcontrollers

Notification Subject:

CCB 7395 Final Notice: Qualification of ANAP as an additional assembly site for ATSAM3U1EB-AU catalog part number (CPN) available in 144L LQFP (20x20x1.4mm) package.

Affected CPNs:

CAAN-02HDKP333_Affected_CPN_02052025.pdf
CAAN-02HDKP333_Affected_CPN_02052025.csv

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 ANAP as an additional assembly site for ATSAM3U1EB-AU catalog part number (CPN) available in 144L LQFP (20x20x1.4mm) package.

Pre and Post Summary Changes:

	Pre Change	**Post Change**	
Assembly Site	ATX Semiconductor (Shanghai) Co. Ltd (ASSH)	ATX Semiconductor (Shanghai) Co. Ltd (ASSH)	Amkor Technology Philippine (P1/P2), INC. (ANAP)
Wire Material	Au	Au	AuPd

Die Attach Material	2288A	2288A	3230
Molding Compound Material	CEL-9200THF	CEL-9200THF	G631HQ
Lead-Frame Material	C7025	C7025	C194
Lead-Frame Lead-Lock	None	None	Locking Lug
Lead-Frame Design	See Pre and Post Change Summary for Comparison		

Impacts to Datasheet: None

Change Impact: None

Reason for Change: To improve on-time delivery performance by qualifying ANAP as an additional assembly site.

Change Implementation Status: In Progress

Estimated First Ship Date: 31 March 2025 (date code: 2514)

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

Timetable Summary:

	February 2025					**March 2025**				
Work Week	05	06	07	08	09	10	11	12	13	14
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: February 05, 2025: Issued final notification.

Note: The change described in this PCN does not alter Microchip's current regulatory compliance regarding the material content of the applicable product.

Attachments:

PCN_CAAN-02HDKP333 Qual Report.pdf
PCN_CAAN-02HDKP333 Pre and Post Change Summary.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)

ATSAM3U1EB-AU

CCB 7395

Pre and Post Change Summary

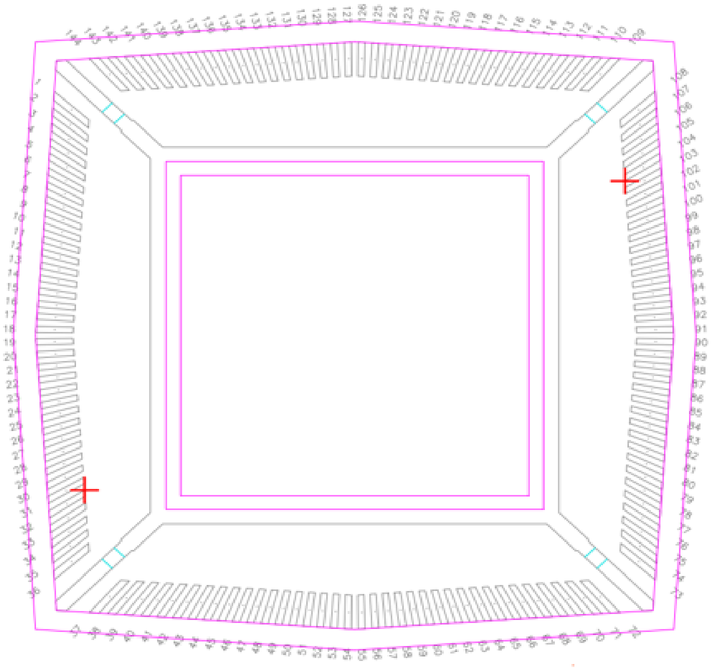
PCN #: CAAN-02HDKP333

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

SMART | CONNECTED | SECURE

LEAD FRAME COMPARISON

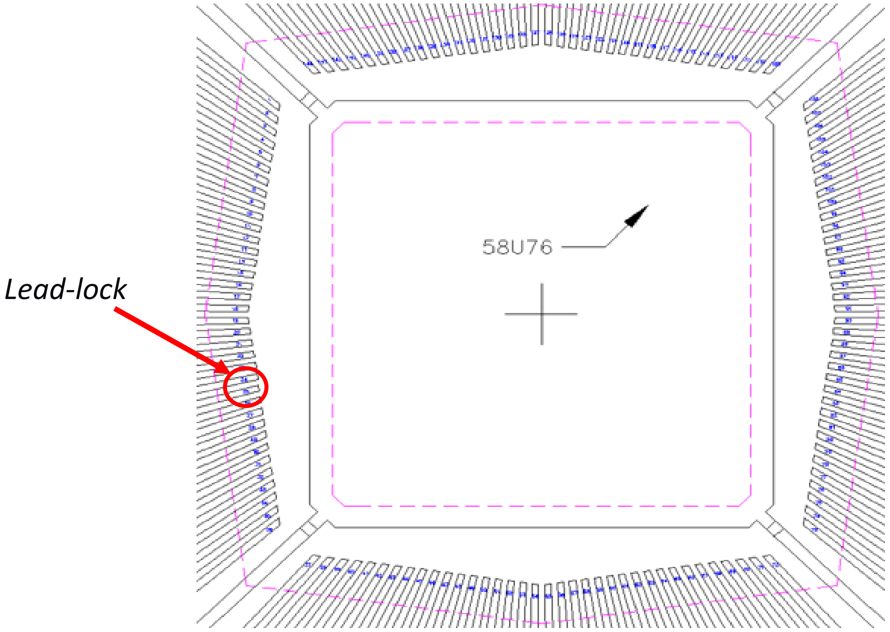
ASSH



Note: Not to scale

Lead Frame Material	**C7025**
Lead-Frame Lead-lock	**None**

ANAP



Note: Not to scale

Lead Frame Material	**C194**
Lead-Frame Lead-lock	**Locking Lug**

MICROCHIP

QUALIFICATION REPORT SUMMARY

RELIABILITY LABORATORY

PCN #: CAAN-02HDKP333

Date:
September 24, 2021

Qualification of ANAP as an additional assembly site for ATSAM3U1EB-AU catalog part number (CPN) available in 144L LQFP (20x20x1.4mm) package will qualify by similarity (QBS). This is Q100 Grade 1 qualification.

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Package Qualification Report

Purpose: Qualification of ANAP as an additional assembly site for ATSAM3U1EB-AU catalog part number (CPN) available in 144L LQFP (20x20x1.4mm) package will qualify by similarity (QBS). This is Q100 Grade 1 qualification.

CCB No: 4443 and 7395

Misc.	Assembly site	ANAP
	BD Number	BDM-002758A
	MP Code (MPC)	58U94YH8XC02
	Part Number (CPN)	AT32UC3C0512C-ALZR
	MSL information	MSL-3 @260C
	Assembly Shipping Media (T/R, Tube/Tray)	T/R
	Base Quantity Multiple (BQM)	800 units
	Reliability Site	MPHIL
Lead-Frame	Paddle size	276x276 mils
	Material	C194
	DAP Surface Prep	Double Ring Ag
	Process	STAMPED
	Lead-lock	Yes
	Part Number	101384548
	Lead Plating	Matte Tin
	Strip Density	UDLF
Bond Wire	Material	AuPd
Die Attach	Part Number	3230
	Conductive	Yes
MC	Part Number	G631HQ
PKG	PKG Type	LQFP
	Pin/Ball Count	144
	PKG width/size	20x20x1.4mm

Package Qualification Report

Manufacturing Information

Assembly Lot No.
ANAP213300097.000
ANAP213300098.000
ANAP213300099.000

Result ☑ Pass ☐ Fail ☐ ____________________

58U94YH8XC02 using UDLF LF#101384548 and mold compound G631HQ with 0.15um wafer tech. in 144L LQFP 20x20x1.4mm from ANAP pass reliability stress tests per QCI-39000 conducted at MPHL rel lab. This package is qualified Moisture/Reflow Sensitivity Classification Level 3 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
Precondition Prior Perform Reliability Tests (At MSL Level 3)	**Electrical Test :25°C** Magnum	JESD22-A113, JIP/ IPC/JEDEC J-STD-020E	231 per lot	Lot 1 0/231 Lot 2 0/231 Lot 3 0/231	Pass Pass Pass	Good Devices
	Bake 150°C, 24 hrs System: HERAEUS		231 per lot			
	Moisture Soak 192h(30°C/60%RH) System: Climats Excal 5423-HE		231 per lot			
	Reflow 3x Convection-Reflow 265°C max System: Mancorp CR.5000F		231 per lot	Lot 1 0/231 Lot 2 0/231 Lot 3 0/231	Pass Pass Pass	
	Electrical Test :25°C Magnum		231 per lot	Lot 1 0/231 Lot 2 0/231 Lot 3 0/231	Pass Pass Pass	

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
UNBIASED HAST	**Stress Condition:** (Standard) + 130°C, 85%RH, 96 hrs. System: HIRAYAMA HASTEST PC-422R8 **Electrical Test:** 25℃ System: Magnum	JESD22-A118	77 units per lot	Lot 1 0/77 Lot 2 0/77 Lot 3 0/77	Pass Pass Pass	Parts had been pre-conditioned at 260°C
HAST	**Stress Condition:** (Standard) 130°C, 85%RH, 96 hrs. VOLTS=5.5V System: HIRAYAMA HASTEST PC-422R8 **Electrical Test:** 25°C /130°C System: Magnum	JESD22-A110	77 units per lot	Lot 1 0/77 Lot 2 0/77 Lot 3 0/77	Pass Pass Pass	

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS	Result	Remarks
Temp Cycle	**Stress Condition:** (Standard) -65°C to +150°C, 500 Cycles System : Votsch VTS^{2}7012 **Electrical Test:** 130°C System: Magnum	JESD22-A104	77 units per lot	Lot 1 0/77 Lot 2 0/77 Lot 3 0/77	Pass Pass Pass	Parts had been pre-conditioned at 260°C
	Bond Strength: Wire Pull (> 1.75 grams) Bond *Shear (>12.6 grams)* System: Dage		5 units, 30 bonds per lot	Lot 1 0/30 Lot 2 0/30 Lot 3 0/30	Pass Pass Pass	
High Temperature Storage Life	**Stress Condition:** Bake 175°C, 500 hrs System: HERAEUS **Electrical Test:** 25°C /130°C System: Magnum	JESD22-A103	45 units per lot	Lot 1 0/45	Pass	

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
Bond Strength	**System:** Dage Wire Pull (> 1.75 grams) Bond *Shear (>12.6 grams)*		5 units, 30 bonds per lot	Lot 1 0/30 Lot 2 0/30 Lot 3 0/30	Pass Pass Pass	
Solderability	**Bake:** Temp 155°C,4Hrs System: Oven Solder Bath: Temp.245°C Solder material: SAC305 Visual Inspection: External Visual Inspection	J-STD-002D	22 units from 1 lot	0/22	Pass	
Physical Dimension	Physical Dimension, 30 units from 3 lots	JESD22 -B100/B108	22 units per lot	Lot 1 0/22 Lot 2 0/22 Lot 3 0/22	Pass Pass Pass	