



Product Change Notification / ALAN-18ICJA641

Date:

20-Apr-2023

Product Category:

8-bit Microcontrollers, Capacitive Touch Sensors

PCN Type:

Manufacturing Change

Notification Subject:

CCB 6236 Final Notice: Qualification of ANAP as an additional assembly site for ATMEGAxx, QT60168xx, ATTINY8xx, AT42QT11xx, AT89LP42xx, and AT42QT12xx device families available in 32L TQFP (7x7x1mm) package.

Affected CPNs:

[ALAN-18ICJA641_Affected_CPN_04202023.pdf](#)

[ALAN-18ICJA641_Affected_CPN_04202023.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 ANAP as an additional assembly site for ATMEGAxx, QT60168xx, ATTINY8xx, AT42QT11xx, AT89LP42xx, and AT42QT12xx device families available in 32L TQFP (7x7x1mm) package.

Pre and Post Change Summary:

	4	5	6	7	8	9	0	1	2
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:April 20, 2023: Issued final 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_ALAN-18ICJA641_Pre and Post Change_Summary.pdf](#)
[PCN_ALAN-18ICJA641_Qual Report.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.

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Affected Catalog Part Numbers (CPN)

ATMEGA8A-AU744
ATMEGA8-16AURA0
QT60168C-ASG
ATMEGA8L-8AURA2
ATTINY88-AU
ATTINY88-AUR
AT42QT1110-AUR
ATMEGA88PA-AN
ATMEGA88PA-ANR
ATMEGA168PA-AN
ATMEGA168PA-ANR
ATMEGA8A-AN
ATMEGA8A-ANR
ATMEGA328P-AN
ATMEGA328P-ANR
ATMEGA48PA-AN
ATMEGA48PA-ANR
ATMEGA48PA-AURB0
ATTINY828-AU
ATTINY828R-AU
ATTINY828-AUR
ATTINY828R-AUR
QT60168-ASG
AT89LP428-20AU
ATMEGA168P-20AU
ATMEGA168PV-10AU
ATMEGA168P-20AN
ATMEGA168PV-10AN
ATMEGA168P-20ANR
ATMEGA168P-20AUR
ATMEGA168PV-10AUR
ATMEGA88P-20AU
ATMEGA88PV-10AU
AT42QT1244-AU
AT42QT1245-AU
ATMEGA88PV-10AUR
ATMEGA88P-20AUR
AT42QT1244-AUR
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ATMEGA48PV-10AU
ATMEGA48P-20AU
ATMEGA48PV-10AUR
ATMEGA48P-20AUR

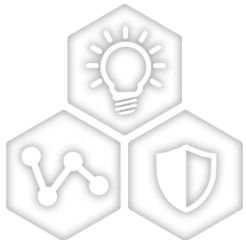
CCB 6236

Pre and Post Change Summary

PCN# ALAN-18ICJA641



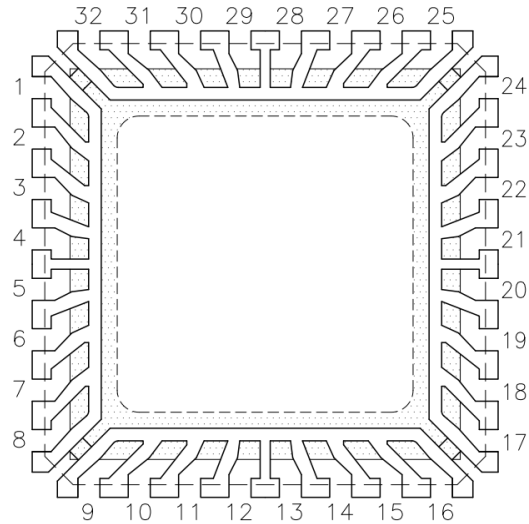
A Leading Provider of Smart, Connected and Secure Embedded Control Solutions



SMART | CONNECTED | SECURE

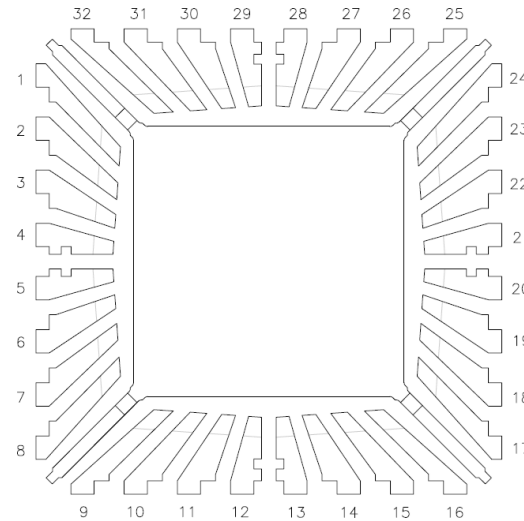
Pre and Post Change Summary

LPI



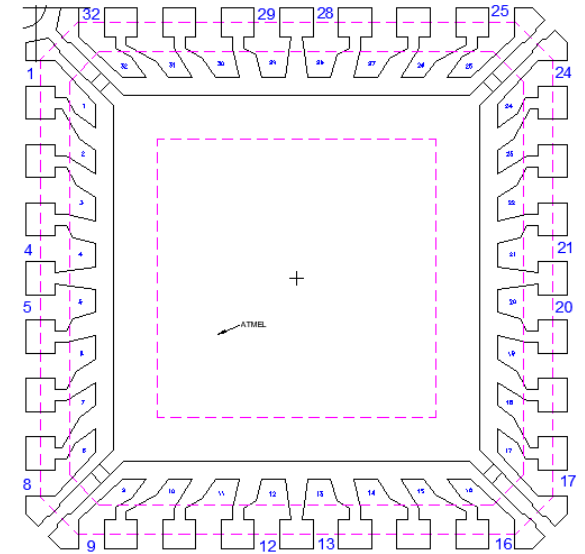
Wire Material	CuPdAu / Au
Die Attach Material	CRM-1033BF
Mold Compound Material	G700
Paddle Size	205X205
DAP Surface Prep	DOUBLE RING

MTAI



Wire Material	CuPdAu / Au
Die Attach Material	3280
Mold Compound Material	G700HA
Paddle Size	160X160
DAP Surface Prep	BARE Cu

ANAP



Wire Material	AuPd
Die Attach Material	3230
Mold Compound Material	G700L
Paddle Size	197x197 mil
DAP Surface Prep	DOUBLE RING

*Not fit to scale



QUALIFICATION REPORT SUMMARY
RELIABILITY LABORATORY

PCN# ALAN-18ICJA641

Date:
July 4, 2021

**Qualification of ANAP as an additional assembly site
for ATMEGAxx, QT60168xx, ATTINY8xx, AT42QT11xx,
AT89LP42xx, and AT42QT12xx device families
available in 32L TQFP (7x7x1mm) package.**



MICROCHIP Package Qualification Report

Purpose: Qualification of ANAP as an additional assembly site for ATMEGAxx, QT60168xx, ATTINY8xx, AT42QT11xx, AT89LP42xx, and AT42QT12xx device families available in 32L TQFP (7x7x1mm) package.

CCB# 6236 and 4312

Misc.	Assembly site	ANAP (ATP)
	BO Number	BDM-002654A
	MP Code (MPC)	354TOYT5XC05
	Part Number (CPN)	ATMEGA32CI-15AZ
	MSL information	MSL-3 @260C
	Assembly Shipping Media (T/R, Tube/Tray)	ATP ship in Tray, MCHP ship in T/R
	Base Quantity Multiple (BQM)	ATP= 250, MCHP= 2,000
Lead-Frame	Paddle size	197x197 mil
	Material	C194
	OAP Surface Prep	Double Ring
	Treatment	No
	Process	Stamped
	Lead-lock	No
	Part Number	101386770
	Lead Plating	Matte Tin
	Strip Size	250x70mm
Bond Wire	Strip Density	VHDLF
	Material	AuPd
Die Attach	Part Number	3230
	Conductive	Yes
MC	Part Number	G700L
Package	PKG Type	TQFP
	Pin/Ball Count	32
	PKG width/size	7x7x1mm



MICROCHIP Package Qualification Report

Manufacturing Information:

Assembly Lot Number
ANAP214100002.000
ANAP214100003.000
ANAP214100004.000

☒ Pass ☐ Fail ☐ _____

VHDLF LF#101386770 with QS device in 32L TQFP 7x7x1mm at ATP is qualified the Moisture/Reflow Sensitivity Classification Level 3 at 260°C reflow temperature per IPC/JEDEC J-STD-020E standard. Minimal Area on Die Paddle with Inverted signal. All units are passing electrical testing.

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS	Result	Remarks
Precondition Prior Perform Reliability Tests MSL-3 @ 260C	Electrical Test : +25°C	JESD22-A113,	693(0)			Good Devices
	External Visual Inspection System: Luxo Lamp	JIP/ IPC/JEDEC J-STD-020E	693(0)	0/693	Pass	
	Bake 150°C, 24 hrs System: HERAEUS		693(0)			
	Moisture Soak 30°C/60%RH Moisture Soak 168hrs. System: Climats Excal 5423-HE		693(0)			
	Reflow 3x Convection-Reflow 260°C max System: Mancorp CR.5000F		693(0)	0/693		
Temp Cycle	Stress Condition: (Standard) -65°C to +150°C, 500 Cycles System: VOTSCH VT 7012 S2	JESD22-A104	231(0)			Parts had been pre-conditioned at 260°C
	Electrical Test: +125°C		231(0)	0/231	Pass	
	Bond Strength: Wire Pull Bond Shear		15(0)	0/15	Pass	
UNBIASED-HAST	Stress Condition: (Standard) +130°C/85%RH, 96H System: HIRAYAMA HASTEST PC-422R8	JESD22-A118	231(0)			Parts had been pre-conditioned at 260°C
	Electrical Test: +25°C		231(0)	0/231	Pass	
BIASED-HAST	Stress Condition: (Standard) +130°C/85%RH, 96H System: HIRAYAMA HASTEST PC-422R8	JESD22-A110	231(0)			Parts had been pre-conditioned at 260°C
	Electrical Test: +25°C, +125°C		231(0)	0/231	Pass	

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
High Temperature Storage Life	Stress Condition: Bake 175°C, 500 hrs System: HERAEUS Electrical Test : +25°C +125°C	JESD22-A103	45 (0) 45 (0)	0/45	Pass	
Solderability Temp 245°C	Bake: Temp 155°C,4Hrs System:Oven Solder Bath: Temp.245°C	J-STD-002	22 (0)	0/22	Pass	Performed at MPHIL
Physical Dimensions	Physical Dimension, 10 units from 3 lot	JESD22-B100/B108	30(0)	0/30	Pass	
Bond Strength Data Assembly	Wire Pull 1 lot, 30 wires from 5 units min	M2011.8 MIL-STD-883	35(0) Wires	0/35	Pass	
Bond Strength Data Assembly	Bond Shear 1 lot, 30 bonds from 5 units min	M2011.8 MIL-STD-883	35(0) bonds	0/35	Pass	