Product Change Notification / CENO-26WFQV556

Date:

13-Jun-2023

Product Category:

General Purpose FPGAs

PCN Type:

Manufacturing Change

Notification Subject:

CCB 5170 and 5170.001 Final Notice: Qualification of MTAI as a new assembly site for selected A3P0xx, A3PN0xx, AGL0xxxx and AGLN0xxxx device families available in 68L VQFN (8x8x1mm) and 48L VQFN (6x6x1mm) packages.

Affected CPNs:

CENO-26WFQV556_Affected_CPN_06132023.pdf
CENO-26WFQV556_Affected_CPN_06132023.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 MTAI as a new assembly site for selected A3P0xx, A3PN0xx, AGL0xxxx and AGLN0xxxx device families available in 68L VQFN (8x8x1mm) and 48L VQFN (6x6x1mm) packages.

Pre and Post Change Summary:

		Pre Change	Post Change
Assembly Site		UTAC Dongguan Limited (UDG)	Microchip Technology Thailand (HQ) (MTAI)
Wire Material		CuPd	CuPdAu/2N
Die Attach Material		8200T	QMI519
Molding Compound Material		G700HCD	G700LTD
Lead-Frame Material	For 68L	C7025	A194
	For 48L	A194	A194
Lead-Frame Paddle Size	For 68L	For 68L: 125x125 mils	122x122 mils
	For 48L	For 48L: 193x193 mils	193 x 193 mils
	See attached Pre and Post Change Comparison		
DAP Surface Prep		Ag Ring Plating	Ag Ring Plating

Impacts to Data Sheet: None

Change Impact None

Reason for Change: To improve manufacturability by qualifying MTAI as a new assembly site.

Change Implementation Status: In Progress

Estimated First Ship Date: June 15, 2023 (date code: 2324)

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

Due to unforeseen circumstances, that are out of Microchip's control, full qualification will be made available as soon as it is approved which may be after the estimated first ship date so that Microchip can maintain continuity of supply and not disrupt customer orders.

Time Table Summary:

	July 2022					>	June 2023					July 2023				
Workweek	28	29	30	31	32		22	23	24	25	26	27	28	29	30	31
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.

Estimated Qualification Completion Date:
July 2023

Note 1: This final PCN will be updated to include the Qualification report as soon as it is completed.
Note 2: Please be advised the qualification completion times may be extended because of unforeseen business conditions.

Revision History: July 21, 2022: Issued initial notification.
June 13, 2023: Issued final notification. Updated the wire material to CuPdAu/2N and die attach material to QMI519 in post change table. Updated table time summary. Revised the affected parts list. Provided estimated first ship date to be on June 15, 2023.

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

Attachments:

PCN_CENO-26WFQV556_Qual Plan.pdf
PCN_CENO-26WFQV556_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.

CCB 5170 and 5170.001
Pre and Post Change Summary
PCN #: CENO-26WFQV556

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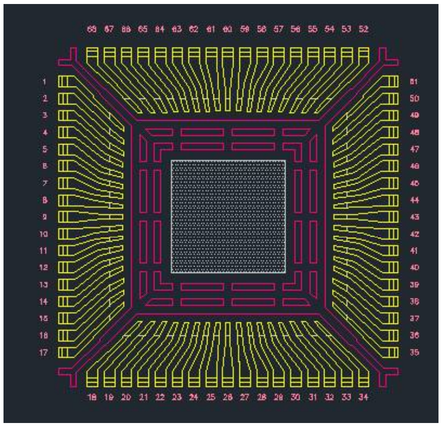
SMART | CONNECTED | SECURE

LEAD FRAME COMPARISON – VQFN 68L

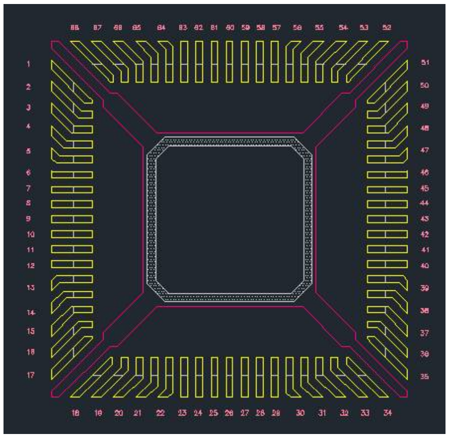
UDG



Note: Not to scale

Lead frame DAP surface prep	**Ag Ring Plating**
Lead Plating	**Matte tin**
Lead-Frame Paddle Size	**125x125 mils**

MTAI

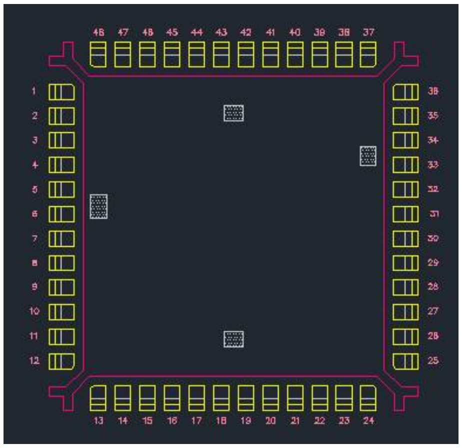


Note: Not to scale

Lead frame DAP surface prep	**Ag Ring Plating**
Lead Plating	**Matte tin**
Lead-Frame Paddle Size	**122x122 mils**

LEAD FRAME COMPARISON – VQFN 48L

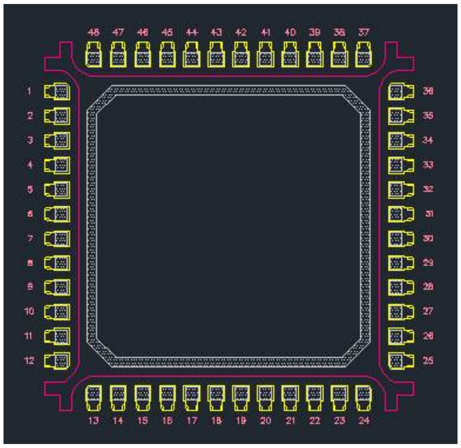
UDG



Note: Not to scale

Lead frame DAP surface prep	Ag Ring Plating
Lead Plating	Matte tin
Lead-Frame Paddle Size	193x193 mils

MTAI



Note: Not to scale

Lead frame DAP surface prep	Ag Ring Plating
Lead Plating	Matte tin
Lead-Frame Paddle Size	193 x 193 mils

QUALIFICATION PLAN SUMMARY

PCN #: CENO-26WFQV556

Date:
Jun 23, 2022

Qualification of MTAI as a new assembly site for selected A3P0xx, A3PN0xx, AGL0xxxx and AGLN0xxxx device families available in 68L VQFN (8x8x1mm) and 48L VQFN (6x6x1mm) packages.

Purpose: Qualification of MTAI as a new assembly site for selected A3P0xx, A3PN0xx, AGL0xxxx and AGLN0xxxx device families available in 68L VQFN (8x8x1mm) and 48L VQFN (6x6x1mm) packages.

CCB # 5170 and 5170.001

Assembly site	MTAI
BD Number	BD-000711/02
MP Code (MPC)	XU0211SAC01E
Part Number (CPN)	A3P030-QNG68-B1
MSL information	3
Assembly Shipping Media (T/R, Tube/Tray)	Tray
Base Quantity Multiple (BQM)	1
Reliability Site	MTAI
Paddle size	122x122
Lead-Frame Material	A194
DAP Surface Prep	Ag ring plating
Treatment	Roughening
Process	Etched
Lead-lock	Yes
Part Number	10106805
Lead Plating	Matte tin
Wire Material	CuPdAu/2N (or CuPd2N)
Die Attach Part Number	QMI519
Conductive	Yes
MC Part Number	G700LTD
PKG Type	VQFN
Pin/Ball Count	68
PKG width/size	8x8x1.0

Test Name	Conditions	Sample Size	Min. Qty of Spares per Lot (should be properly marked)	Qty of Lots	Total Units	Fail Accept Qty	Est. Dur. Days	Test Site	Special Instructions
Wire Bond Pull - WBP	Mil. Std. 883-2011	5	0	1	5	0 fails after TC	5	MTAI	30 bonds from a min. 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	5	0	1	5		5	MTAI	30 bonds from a min. 5 devices.
External Visual	Mil. Std. 883-2009/2010	All devices prior to submission for qualification testing	0	3	ALL	0	5	MTAI	
Preconditioning - Required for surface mount devices	+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; Electrical test pre and post stress at +25C MSL3/260	231	15	3	738	0	15	MTAI	Spares should be properly identified. 77 parts from each lot to be used for HAST, Autoclave, Temp Cycle test.
HAST	+130°C/85% RH for 96 hours. Electrical test pre and post stress at +25°C and hot temp	77	5	3	246	0	10	MTAI	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
UHAST	+130°C/85% RH for 96 hrs. Electrical test pre and post stress at 25°C	77	5	3	246	0	10	MTAI	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
Temp Cycle	-65°C to +150°C for 500 cycles. Electrical test pre and post stress at hot temp; 3 gram force WBP, on 5 devices from 1 lot, test following Temp Cycle stress.	77	5	3	246	0	15	MTAI	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.

CENO-26WFQV556 - CCB 5 A3PN0xx AGL0xxxx and AGLN0xxxx device families available in 68L VQFN (8x8

Affected Catalog Part Numbers(CPN)

A3P030-1QNG48
A3P030-2QNG48
A3P030-QNG48
A3P015-QNG68
A3P030-1QNG68
A3P030-2QNG68
A3P030-QNG68
A3P030-1QNG48I
A3P030-2QNG48I
A3P030-QNG48I
A3P015-QNG68I
A3P030-1QNG68I
A3P030-2QNG68I
A3P030-QNG68I
A3PN030-ZQNG48I
A3PN030-ZQNG48
A3PN030-ZQNG68I
A3PN030-ZQNG68
A3PN010-1QNG48I
A3PN010-1QNG48
A3PN010-2QNG48I
A3PN010-2QNG48
A3PN010-QNG48I
A3PN010-QNG48
A3PN015-1QNG68I
A3PN015-1QNG68
A3PN015-2QNG68I
A3PN015-2QNG68
A3PN015-QNG68I
A3PN015-QNG68
A3PN020-1QNG68I
A3PN020-1QNG68
A3PN020-2QNG68I
A3PN020-2QNG68
A3PN020-QNG68I
A3PN020-QNG68
AGL030V2-QNG48
AGL030V5-QNG48
AGL015V2-QNG68
AGL015V5-QNG68
AGL030V2-QNG68
AGL030V5-QNG68

AGL030V2-QNG48I
AGL030V5-QNG48IX94
AGL030V5-QNG48I
AGL030V2-QNG68I
AGL030V5-QNG68I
AGLN010V2-QNG48IX11
AGLN010V2-QNG48IX94
AGLN010V2-QNG48I
AGLN010V2-QNG48PU33
AGLN010V2-QNG48
AGLN010V5-QNG48I
AGLN010V5-QNG48Z204
AGLN010V5-QNG48
AGLN015V2-QNG68I
AGLN015V2-QNG68
AGLN015V5-QNG68IPU88
AGLN015V5-QNG68IPZ88
AGLN015V5-QNG68I
AGLN015V5-QNG68
AGLN020V2-QNG68I
AGLN020V2-QNG68PS16
AGLN020V2-QNG68
AGLN020V5-QNG68I
AGLN020V5-QNG68