



Product Change Notification / ALAN-16PQCR399

Date:

07-Mar-2022

Product Category:

Car Access

PCN Type:

Manufacturing Change

Notification Subject:

CCB 3167.005 Initial Notice: Qualification of GRTM as an additional fabrication location for selected ATA5291 device family available in 48L VQFN (7x7x1mm) package.

Affected CPNs:

[ALAN-16PQCR399_Affected_CPN_03072022.pdf](#)
[ALAN-16PQCR399_Affected_CPN_03072022.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 GRTM as an additional fabrication location for selected ATA5291 device family available in 48L VQFN (7x7x1mm) package.

Pre and Post Change Summary:

	Pre Change	Post Change

Fab Site	United Microelectronics Corporation (UMC) - Fab 8	United Microelectronics Corporation (UMC) - Fab 8	Microchip Technology Gresham (GRTM) – Fab 4
Wafer Size	8-inch wafers	8-inch wafers	8-inch wafers

Impacts to Data Sheet:None

Change Impact:None

Reason for Change:To improve productivity and on-time delivery performance by qualifying GRTM as an additional fabrication location.

Change Implementation Status:In Progress

Estimated Qualification Completion Date:October 2022

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:

	March 2022					->	October 2022					
	10	11	12	13	14		40	41	42	43	44	45
Workweek												
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: March 7, 2020: 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_ALAN-16PQCR399 Qual Plan.pdf](#)

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

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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)

ATA5291-GJQW



QUALIFICATION PLAN SUMMARY

PCN#: ALAN-16PQCR399

**Date:
October 20, 2021**

Qualification of GRTM as an additional fabrication location for selected ATA5291 device family available in 48L VQFN (7x7x1mm) package. This is a qualification by similarity (QBS).

Purpose:

Qualification of GRTM as an additional fabrication location for selected ATA5291 device family available in 48L VQFN (7x7x1mm) package. This is a qualification by similarity (QBS).

<u>Misc.</u>	Assembly site	MMT
	BD Number	BDM-002203
	MP Code (MPC)	77A11YSLBxxx
	Part Number (CPN)	ATA5291
	MSL information	1
	Assembly Shipping Media (T/R, Tube/Tray)	T&R
	Base Quantity Multiple (BQM)	6000
	Reliability Site	MPHIL
	CCB	4914 and 3167.005
<u>Lead-Frame</u>	Paddle size	228 x 228 mils
	Material	C194
	DAP Surface Prep	Selective Ag
	Treatment	Rough Cu
	Process	Etched
	Lead-lock	Yes
	Lead Plating	Matte Sn
<u>Bond Wire</u>	Material	CuPdAu
<u>Die Attach</u>	Part Number	3280
	Conductive	Yes
<u>MC</u>	Part Number	G700LTD
<u>PKG</u>	PKG Type	VQFN
	Pin/Ball Count	48
	PKG width/size	7x7mm

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	Special Instructions
Wire Bond Pull - WBP	Mil. Std. 883-2011	5	0	1	5	0	5	30 bonds from a min. 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	5	0	1	5	0	5	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	
HTSL (High Temp Storage Life)	JESD22-A103 +175°C 2x Stress	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 1 + 3X reflow at peak reflow temperature per <i>Jedec-STD-020E</i> for package type.	231 + 45 (for devices requiring PTC)	15 + 5 (for devices requiring PTC)	3	738 + 50 (for devices requiring PTC)	0	15	Spares should be properly identified. 77 parts from each lot to be used for HAST, uHAST, Temp Cycle test. 45 parts from one lot to be used for PTC test (for devices requiring PTC).
HAST	JESD22-A101 or A110 +130°C/85% RH for 96 hrs 2x Stress Requirements)	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.
uHAST	JESD22-A102, A118, or A101 +130°C/85% RH for 96 hrs	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 -55°C to +125°C, -55°C to +150°C or -- 65°C to +150°C 2x Stress	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.
Power Temperature Cycling (For devices requiring PTC)	JESD22-A105 -40°C to +150°C, - 40°C to +125°C or - 40°C to +105°C 2x Stress	45	5	1	50	0		Spares should be properly identified.

Rel Stress	Sample Size	Temp	Notes	Readpoint	Test Temp
T0	3066			A0: Post Assy Room	~25°C
				A1: Post Assy Cold	-40°C
				A2: Post Assy Hot	125°C
ELFR	800 plus 30 spares	125°C	48h	H0: Readout after EFR, Post ELFR Room	~25°C
				H1: Readout after EFR, Post ELFR Cold	-40°C
				H2: Readout after EFR, Post ELFR Hot	125°C
HTOL	80 plus 30 spares	125°C	1000h	Post DLT Testing 96 Hour	
				H0: Readout after HTOL, 96 hour DLT Room	~25°C
				H1: Readout after HTOL, 96 hour DLT Cold	-40°C
				H2: Readout after HTOL, 96 hour DLT Hot	125°C
				Post DLT Stress at 500 Hours	
				H0: Readout after HTOL, 500 hour DLT Room	~25°C
				H1: Readout after HTOL, 500 hour DLT Cold	-40°C
				H2: Readout after HTOL, 500 hour DLT Hot	125°C
				Post DLT Stress at 1008 Hours	
				H0: Readout after HTOL, 1008 hour DLT Room	~25°C
				H1: Readout after HTOL, 1008 hour DLT Cold	-40°C
				H2: Readout after HTOL, 1008 hour DLT Hot	125°C
ESD HBM / MM	50			H0: Readout after ESD, Post ESD Room	~25°C
				H2: Readout after ESD, Post ESD Hot	125°C
ESD CDM	45			H0: Readout after ESD, Post ESD Room	~25°C
				H2: Readout after ESD, Post ESD Hot	125°C
LU	20	25°C & 125°C		H0: Readout after LU 25°C Post LU Room	~25°C
				H2: Readout after LU 25°C Post LU Room	125°C
				H0: Readout after LU 125°C Post LU Room	~25°C
				H2: Readout after LU 125°C Post LU Room	125°C
ED	33			H0: Readout 50 pcs. serialized samples, RT	~25°C
				H1: Readout 50 pcs. serialized samples, HT	125°C
				H2: Readout 50 pcs. serialized samples, CT	-40°C