Product Change Notification / LIAL-23OTHC778

Date:

12-Jan-2022

Product Category:

Microprocessors

PCN Type:

Manufacturing Change

Notification Subject:

CCB 3700.006 Final Notice: Qualification of a new fabrication location TMGR of component U5 that is one of many components of the ATSAM5D27-WLSOMxx device family available in the 188L module (40.8x40.8x3.3mm).

Affected CPNs:

LIAL-23OTHC778_Affected_CPN_01122022.pdf
LIAL-23OTHC778_Affected_CPN_01122022.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 a new fabrication location TMGR of component U5 that is one of many components of the ATSAM5D27-WLSOMxx device family available in the 188L module (40.8x40.8x3.3mm). Please see attached to reveal the location of the component U5 on the module.

Pre and Post Change Summary:

	Pre Change	Post Change
Fabrication Site	Micrel Inc. (MCRL)	Microchip Technology Tempe – Fab 2 (TMGR)
Wafer size	6 inch wafers	8 inch wafers

Impacts to Data Sheet: None

Change Impact None

Reason for Change: To improve on time delivery and performance by qualifying a new fabrication location TMGR of component U5 that is one of many components of the ATSAM5D27-WLSOMxx device family available in the 188L module (40.8x40.8x3.3mm).

Change Implementation Status: In Progress

Estimated First Ship Date: January 30, 2022 (date code: 2206)

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

Time Table Summary:

	January 2022					
Workweek	01	02	03	04	05	06
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: January 12, 2022: Issued final notification.

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

Attachments:

PCN_LIAL-23OTHC778_ Qual Report.pdf
PCN_LIAL-23OTHC778_Component location.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.

QUALIFICATION REPORT SUMMARY

RELIABILITY LABORATORY

PCN #: LIAL-23OTHC778

Date
March 17, 2016

Qualification of a new fabrication location TMGR of component U5 that is one of many components of the ATSAM5D27-WLSOMxx device family available in the 188L module (40.8x40.8x3.3mm). This is a qualification by similarity(QBS).

Purpose: Qualification of a new fabrication location TMGR of component U5 that is one of many components of the ATSAM5D27-WLSOMxx device family available in the 188L module (40.8x40.8x3.3mm). This is a qualification by similarity (QBS).

CCB No: 1737.06 and 3700.006

PART NUMBER	PACKAGE TYPE	ASSEMBLY LOCATION	WAFER SIZE	PROCESS NAME
MIC4102YM /27801	SOIC-8L	STARS, THAILAND	8”	B2M2

DIE QUALIFICATION RESULTS

TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	168 HR Rej/ss	500 HR Rej/ss	1000 HR Rej/ss	COMMENTS
HTOL **High Temperature Operating Life Test**	JESD22, Method 108 TA= + 125°C Vdd = + 16V HB = + 116V HS = + 100V	1546	V416242557.100MQA	0/77	0/77	0/77	
		1547	V416242557.110MQD	0/77	0/77	0/77	
		1550	V416242557.200MQD	0/77	0/77	0/77	

HTOL Test Note:

The 4102 has a level shift circuit. When Vdd is not powered during VHBHS_ABS_MAX leakage test, gates of level shift transistors could float making their operating state unstable. Test program was changed to hold Vdd to same potential as HB when measuring HB to HS leakage. All parts pass this test condition.

ELECTROSTATIC DISCHARGE

TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	STRESS	RESULT Rej/ss	COMMENTS
ESD-HBM Human Body Model ATE Test @ Room +25C	R= 1500 Ohms C= 100 pF 1X +/- Voltage	1546	V416242557.100MQA	+/-2000V	0/3	Note: ESD ratings are device specific. All Products qualified on the 8” Micrel process technologies will have the same or better ESD and Latch-up performance as the 6” San Jose Products.
ESD-CDM Charged Device Model ATE Test @ Room +25C	JESD22-C101 1X +/- Voltage	1546	V416242557.100MQA	+/-1500V	0/3	

TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	STRESS	RESULT Rej/ss	COMMENTS
LATCH-UP	JESD-78 TA = +25°C	1546	V416242557.100MQA	I/O LU O/V LU	0/6 0/6	

PACKAGE QUALIFICATION RESULTS

TEST DESCRIPTION	**METHOD/CONDITIONS**	**DATE CODE**	**LOT ID.**	**Rej/ss**	**COMMENTS**
Level 1 Pre-conditioning Flow	**JESD22-A113**	1546	V416242557.100MQA	0/320	
		1547	V416242557.110MQD	0/145	
		1550	V416242557.200MQD	0/145	

TEST DESCRIPTION	**METHOD/CONDITIONS**	**DATE CODE**	**LOT ID.**	**96 HR** Rej/ss	**COMMENTS**
PRESSURE POT **With Level 1 Pre-conditioning** Tpeak + 260°C 3X Reflow	JESD22-A102	1546	V416242557.100MQA	0/45	
	Ta = +121°C/100%RH	1547	V416242557.110MQD	0/45	
	15 PSIG	1550	V416242557.200MQD	0/45	

TEST DESCRIPTION	**METHOD/CONDITIONS**	**DATE CODE**	**LOT ID.**	**96 HR** Rej/ss	**COMMENTS**
HAST **With Level 1 Pre-conditioning** Tpeak + 260°C 3X Reflow	JESD22-A110 (BIASED)	1546	V416242557.100MQA	0/45	
	Ta= +130°C/85%RH	1547	V416242557.110MQD	0/45	
	Vdd = +16V	1550	V416242557.200MQD	0/45	
	HB/HS = +38V				

TEST DESCRIPTION	**METHOD/CONDITIONS**	**DATE CODE**	**LOT ID.**	**500 CY** Rej/ss	**COMMENTS**
TEMP CYCLE **With Level 1 Pre-conditioning** Tpeak + 260°C 3X Reflow	JESD22-A104	1546	V416242557.100MQA	0/45	
	Ta = -65°C / +150°C	1547	V416242557.110MQD	0/45	
		1550	V416242557.200MQD	0/45	

TEST DESCRIPTION	**METHOD/CONDITIONS**	**DATE CODE**	**LOT ID.**	**1000 HR** Rej/ss	**COMMENTS**
HTSL **High Temperature Storage Life** **With Level 1 Pre-conditioning**	JESD22-A103	1546	V416242557.100MQA	0/76	
	Ta = +150°C	1547	V416242557.110MQD		
		1550	V416242557.200MQD		

TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	500 HR Rej/ss	**COMMENTS**
HTSL **High Temperature Storage Life** **With Level 1 Pre-conditioning**	JESD22-A103	1546	V416242557.100MQA	0/76	
	Ta = +175°C	1547	V416242557.110MQD		
		1550	V416242557.200MQD		

FLAMMABILITY	UL-94V-0 Certified	All mold compounds used by Micrel meet this standard. See the UL website on-line list of material flammability certifications. Micrel requires a Certificate of Compliance from the assembly house and we verify the certifications on the web.

CCB 3700.006
PCN#: LIAL-23OTHC778

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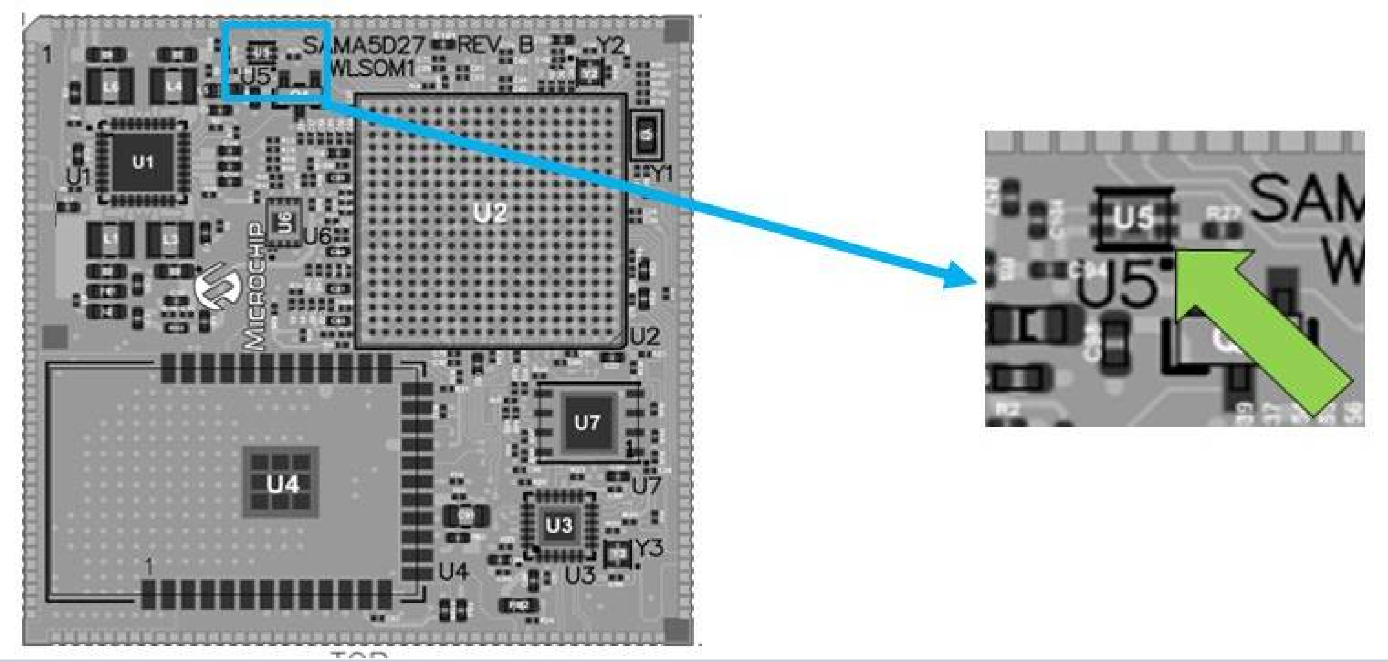
SMART | CONNECTED | SECURE

U5 Component Location



LIAL-23OTHC778 - CCB 3700.006 Final Notice: Qualification of a new fabrication location TMGR of compon

Affected Catalog Part Numbers(CPN)

ATSAMA5D27-WLSOM1
ATSAMA5D27-WLSOM21