Product Change Notification - LIAL-27CYLD889

Date:

04 Mar 2019

Product Category:

Simple and Complex Programmable Logic

Affected CPNs:

Notification subject:

CCB 3730 Initial Notice: Qualification of MMT as an additional assembly site for selected Atmel products of 19.7K wafer technology available in 100L TQFP (14x14x1mm) package.

Notification text:

PCN Status:
Initial notification

PCN Type:
Manufacturing Change

Microchip Parts Affected:
Please open one of the icons found in the Affected CPNs section above.

NOTE: For your convenience Microchip includes identical files in two formats (.pdf and .xls)

Description of Change:
Qualification of MMT as an additional assembly site for selected Atmel products of 19.7K wafer technology available in 100L TQFP (14x14x1mm) package.

Pre Change:
Assembled at LPI using CRM-1033BF die attach and C194 lead frame material

Post Change:
Assembled at LPI using CRM-1033BF die attach and C194 lead frame material or assembled in MMT using 3280 die attach and C7025 lead frame material

Pre and Post Change Summary:

	Pre Change	Post Change	
Assembly Site	Lingsen Precision Industires, LTD. (LPI)	Lingsen Precision Industires, LTD. (LPI)	Microchip Technology Thailand (Branch) (MMT)
Wire material	Au	Au	Au
Die attach material	CRM-1033BF	CRM-1033BF	3280
Molding compound material	G700	G700	G700
Lead frame material	C194	C194	C7025
Paddle size	276x276 mils	276x276 mils	261x261 mils
DAP Surface	Ag Spot Plated	Ag Spot Plated	Double Ag Ring Plated

Impacts to Data Sheet:
None

Change Impact:
None

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

Change Implementation Status:
In Progress

Estimated Qualification Completion Date:
April 2019

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 2019					April 2019				
Workweek	09	10	11	12	13	14	15	16	17	18
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 04, 2018: 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.
Attachment(s):
PCN_LIAL-27CYLD889_ QUAL PLAN.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)

ATF1504AS-10AU100
ATF1504AS-10AU100-T
ATF1504AS-7AX100
ATF1504ASL-25AU100
ATF1504ASV-15AU100
ATF1504ASVL-20AU100
ATF1508AS-10AU100
ATF1508AS-7AX100
ATF1508ASL-25AU100
ATF1508ASV-15AU100
ATF1508ASV-15AU100-T
ATF1508ASVL-20AU100
ATF1508ASVL-20AU100-T

QUALIFICATION PLAN SUMMARY

PCN #: LIAL-27CYLD889

Date
February 21, 2019

Qualification of MMT as an additional assembly site for selected Atmel products of 19.7K wafer technology available in 100L TQFP (14x14x1mm) package.

Purpose: **Qualification of MMT as an additional assembly site for selected Atmel products of 19.7K wafer technology available in 100L TQFP (14x14x1mm) package.**

CCB No.: **3730**

		Qualification Report
Miscellaneous	**Assembly site**	MMT
	BD Number	BDM-002015/A
	MP Code (MPC)	197661E5XC01
	Part Number (CPN)	ATF1508AS-7AX100
Lead-Frame	**Paddle size**	261x261 mils
	Material	C7025
	Surface	Double Ag Ring Plated
	Treatment	BOT
	Process	Etched
	Lead-lock	No
	Part Number	TBD
	Lead Plating	Matte Tin
	Strip Size	70x250mm
	Strip Density	30 units/strip
Bond Wire	**Material**	Au
Die Attach	**Part Number**	3280
	Conductive	Yes
Mold Compound	**Part Number**	G700HA
PKG	**PKG Type**	TQFP
	Pin/Ball Count	100
	PKG width/size	14x14x1.0mm
Die	**Die Thickness**	11 mils
	Die Size	243.0x233.0 mils
	Fab Process (site)	19.7K/MCSO

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
Standard Pb-free Solderability	J-STD-002D; Perform 8 hour steam aging for Matte tin finish and 1 hour steam aging for NiPdAu finish prior to testing. Standard Pb-free: Matte tin/ NiPdAu finish, SAC solder, wetting temp 245°C for both SMD & through hole packages.	22	5	1	27	> 95% lead coverage	5	MTAI	Standard Pb-free solderability is the requirement. SnPb solderability (backward solderability- SMD reflow soldering) is required for any plating related changes and highly recommended for other package BOM changes.
Backward Solderability	J-STD-002D; Perform 8 hours steam aging for Matte tin finish and 1 hour steam aging for NiPdAu finish prior to testing. Backward: Matte tin/ NiPdAu finish, SnPb solder, wetting temp 215°C for SMD.	22	5	1	27	> 95% lead coverage	5	MTAI	
Wire Bond Pull - WBP	Mil. Std. 883-2011	5	0	3	15	0 fails after TC	5	MMT/MTAI	30 bonds from a minimum of 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	5	0	3	15	0	5	MMT/MTAI	30 bonds from a minimum of 5 devices.
Wire Sweep		5	0	3	15	0		MMT	Required for any reduction in wire bond thickness.
Physical Dimensions	Measure per JESD22 B100 and B108	10	0	3	30	0	5	MMT	
External Visual	Mil. Std. 883-2009/2010	All devices prior to submission for qualification testing	0	3	ALL	0	5	MMT/MTAI	
HTSL (High Temp Storage Life)	+175 C for 504 hours. Electrical test pre and post stress at +25°C and hot temp. Test 1 lot @ 85°C	45	5	1	50	0	25	MTAI -rel Pre and post-test at MCSO	

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
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 +25°C. MSL3 @ 260°C	231	15	3	738	0	15	MTAI -rel Pre and post-test at MCSO	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. Test 1 lot @ 85°C	77	5	3	246	0	10	MTAI -rel Pre and post-test at MCSO	Spares should be properly identified. Use the parts which have gone through Pre-conditioning
Unbiased HAST	+130°C/85% RH for 96 hrs. Electrical test pre and post stress at +25°C.	77	5	3	246	0	10	MTAI -rel Pre and post-test at MCSO	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. Test 1 lot @ 85°C	77	5	3	246	0	15	MTAI -rel Pre and post-test at MCSO	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.