Product Change Notification / LIAL-09VUUA424

Date:

15-Jun-2022

Product Category:

Ethernet Controllers, Ethernet PHYs

PCN Type:

Manufacturing Change

Notification Subject:

CCB 5151 Initial Notice: Qualification of a new lead frame DAP surface prep material for selected KSZ8041xx, SPNZ80105xx and KSZ8851xx device families available in 32L VQFN (5x5x0.9mm) package assembled at MTAI assembly site.

Affected CPNs:

LIAL-09VUUA424_Affected_CPN_06152022.pdf
LIAL-09VUUA424_Affected_CPN_06152022.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 a new lead frame DAP surface prep material for selected KSZ8041xx, SPNZ80105xx and KSZ8851xx device families available in 32L VQFN (5x5x0.9mm) package assembled at MTAI assembly site.

Pre and Post Change Summary:

	Pre Change	**Post Change**
Assembly Site	Microchip Technology Thailand (HQ) (MTAI)	Microchip Technology Thailand (HQ) (MTAI)
Wire Material	Au/2N	Au/2N
Die Attach Material	3280	3280
Molding Compound Material	G700LTD	G700LTD
Lead-Frame Material	A194	A194
Lead Frame DAP Surface Prep	Ag selective plating	Ag selective plating (Add more Ag area)
	See Pre and Post Change Summary for comparison.	

Impacts to Data Sheet: None

Change Impact None

Reason for Change: To improve productivity by qualifying a new lead frame DAP surface prep material.

Change Implementation Status: In Progress

Estimated Qualification Completion Date: July 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:

	June 2022				**July 2022**				
Workweek	23	24	25	26	27	28	29	30	31
Initial PCN Issue Date			x						
Qual Report					x				

Availability									
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: June 15, 2022: 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_LIAL-09VUUA424_Pre and Post Change Summary.pdf
PCN_LIAL-09VUUA424_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.

QUALIFICATION PLAN SUMMARY

PCN#: LIAL-09VUUA424

May 25, 2022

Qualification of a new lead frame DAP surface prep material for selected KSZ8041xx, SPNZ80105xx and KSZ8851xx device families available in 32L VQFN (5x5x0.9mm) package assembled at MTAI assembly site.

Purpose: Qualification of a new lead frame DAP surface prep material for selected KSZ8041xx, SPNZ80105xx and KSZ8851xx device families available in 32L VQFN (5x5x0.9mm) package assembled at MTAI assembly site.

Assembly site	MTAI
BD Number	BD-00678/05
MP Code (MPC)	TKDB17PFAA01
Part Number (CPN)	KSZ8851SNLI
CCB No.	5151
MSL information	2
Assembly Shipping Media (T/R, Tube/Tray)	Tray
Base Quantity Multiple (BQM)	490
Reliability Site	MTAI
Paddle size	150x150 mils
Material	A194
DAP Surface Prep	Ag selective plating (Add more Ag area)
Treatment	Roughening
Process	Etched
Lead-lock	Yes
Part Number	10103214
Lead Plating	Matte tin
Material	Au/2N
Part Number	3280
Conductive	Yes
Part Number	G700LTD
PKG Type	VQFN
Pin/Ball Count	32
PKG width/size	5x5mm

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	0	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. MSL2/260	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-
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.

CCB#: 5151
Pre and Post Change Summary
PCN #: LIAL-09VUUA424

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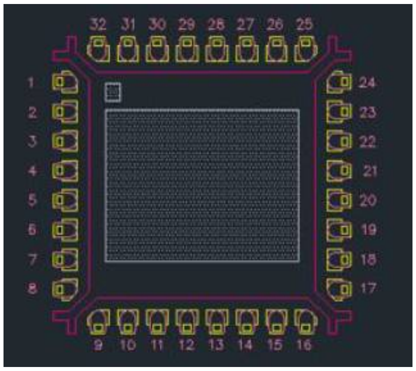
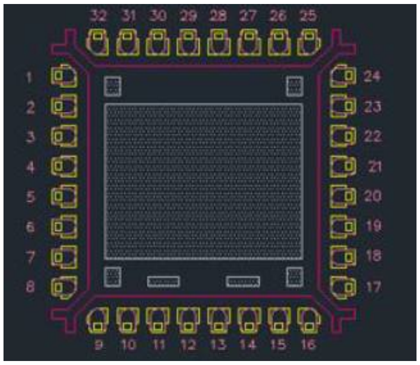
Lead Frame Comparison

Pre Change	Post Change
 	
Lead frame DAP surface prep **Ag selective plating**	**Lead frame DAP surface prep** **Ag selective plating (Add more Ag area)**

LIAL-09VUUA424 - CCB 51 SPNZ80105xx and KSZ8851xx device families available in 32L VQFN (5x5x0.9mm

Affected Catalog Part Numbers(CPN)

KSZ8041NL
KSZ8041RNL
SPNZ801059
KSZ8041NLI
KSZ8041RNLI
KSZ8041NL-TR
KSZ8041RNL-TR
SPNZ801059-TR
KSZ8041NLI-TR
KSZ8041RNLI-TR
KSZ8851SNL
KSZ8851SNLI
KSZ8851SNL-TR
KSZ8851SNLI-TR