Product Change Notification / LIAL-07RPOQ740

Date:

11-Aug-2022

Product Category:

Ethernet PHYs

PCN Type:

Manufacturing Change

Notification Subject:

CCB 5135 Initial Notice: Qualification of a new lead frame with more Ag area on DAP surface prep for selected KSZ8081 and KSZ8091 device families available in 32L VQFN (5x5x0.9mm) package assembled at MTAI assembly site.

Affected CPNs:

LIAL-07RPOQ740_Affected_CPN_08112022.pdf
LIAL-07RPOQ740_Affected_CPN_08112022.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 with more Ag area on DAP surface prep for selected KSZ8081 and KSZ8091 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 new lead frame with more Ag area on DAP surface prep.

Change Implementation Status: In Progress

Estimated Qualification Completion Date: September 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:

	August 2022					September 2022			
Workweek	32	33	34	35	36	37	38	39	40

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: August 11, 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-07RPOQ740_Pre and Post Change Summary.pdf
PCN_LIAL-07RPOQ740_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-07RPOQ740

Date
August 2, 2022

Qualification of a new lead frame with more Ag area on DAP surface prep for selected KSZ8081 and KSZ8091 device families available in 32L VQFN (5x5x0.9mm) package assembled at MTAI assembly site.

Purpose: Qualification of a new lead frame with more Ag area on DAP surface prep for selected KSZ8081 and KSZ8091 device families available in 32L VQFN (5x5x0.9mm) package assembled at MTAI assembly site.

Assembly site	MTAI
BD Number	BD-000677/02
MP Code (MPC)	XKAA19PFAVA2
Part Number (CPN)	KSZ8051MNLV-VAO
MSL information	2
Assembly Shipping Media (T/R, Tube/Tray)	Tray
CCB No.	5135
Base Quantity Multiple (BQM)	490
Reliability Site	MTAI
Paddle size	150x150mm
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	Reliability Stress Read Point Grade 2: -40°C to +105°C (MCHP E Temp)	Pre & Post Reliability Stress Test Temperature Grade 2: -40°C to +105°C (MCHP E Temp)	Sample Size	Min. Qty of Spares per Lot (should be properly marked)	Qty of Lots	Total Units	Fail Accept Qty	Est. Dur. Days	ATE Test Site	REL 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	MTAI	
HTSL (High Temp Storage Life)	JESD22-A103 +150°C	Grade 2: 500 hrs (150°C)	Grade 2: +25°C, +105°C	45	5	1	50	0	21 - 83	OSE	MTAI	Spares should be properly identified.
Preconditioning - Required for surface mount devices	J-STD-020JESD22-A113+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. MSL-2/260°C		Grade 2: +25°C, +105°C	231	15	3	738	0	15	OSE	MTAI	Spares should be properly identified. 77 parts from each lot to be used for HAST, Autoclave, Temp Cycle test.
HAST	JESD22-A101 or A110 +130°C/85% RH for 96 hrs	Grade 2: 96 hrs (+130°C/85% RH)	Grade 2: +25°C, +105°C	77	5	3	246	0	10 - 14	OSE	MTAI	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	Grade 2: 96 hrs (+130°C/85% RH)	Grade 2: +25°C	77	5	3	246	0	10	OSE	MTAI	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
Temp Cycle	JESD22-A104 -55ºC to +125ºC,	Grade 2: 1000 cycles (-55ºC to +125ºC)	Grade 2: +105°C	77	5	3	246	0	15 - 60	OSE	MTAI	Spares should be properly identified. Use the parts which have gone through Pre-conditioning. are required.

CCB#: 5135
Pre and Post Change Summary
PCN #: LIAL-07RPOQ740

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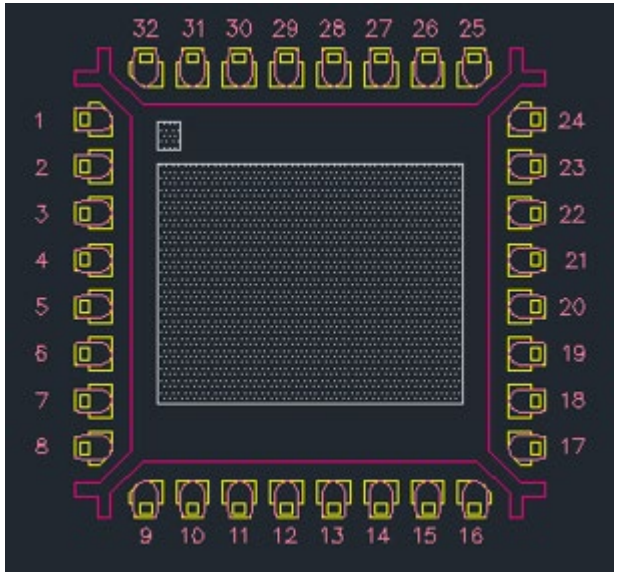
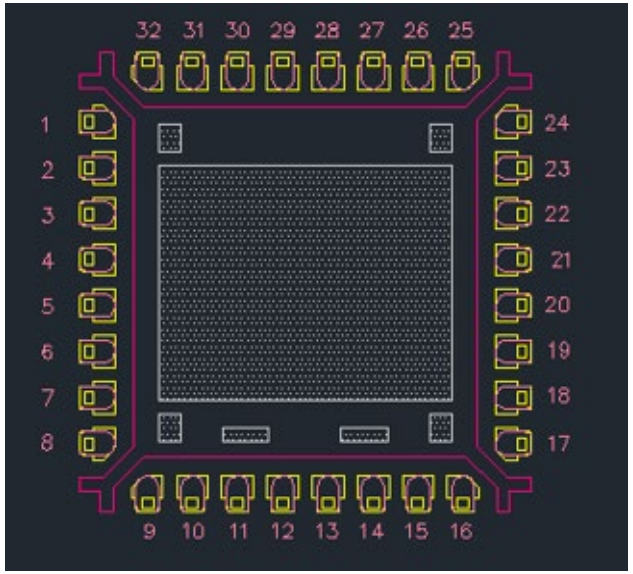
Lead Frame Comparison

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

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Affected Catalog Part Numbers(CPN)

KSZ8091RNBCA
KSZ8081MNXCA
KSZ8091MNXCA
KSZ8081MNXIA
KSZ8081RNBCA-TR
KSZ8091RNBCA-TR
KSZ8081MNXCA-TR
KSZ8091MNXCA-TR
KSZ8081RNBIA-TR
KSZ8091RNBIA-TR
KSZ8081MNXIA-TR
KSZ8091MNXIA-TR

ssembled at MTAI assembly site.