Product Change Notification - KSRA-09NUVS538

Date:

22 Aug 2018

Product Category:

Others; Ethernet PHYs

Affected CPNs:

Notification subject:

CCB 2881 Initial Notice: Qualification of ASE as a new assembly site for selected Micrel products available in 32L VQFN package using palladium coated copper with gold flash (CuPdAu) bond wire

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 ASE as a new assembly site for selected Micrel products available in 32L VQFN package using palladium coated copper with gold flash (CuPdAu) bond wire

Pre Change:

Assembled at TICP using gold (Au) bond wire

Post Change:

Assembled at ASE using palladium coated copper with gold flash (CuPdAu) bond wire

Pre and Post Change Summary:

	Pre Change		Post Change
Assembly Site	Taiwan IC Packing Corp (TICP)		ASE Inc. (ASE)
Wire material	Au	Ag	CuPdAu
Die attach material	EN-4900		EN-4900
Molding compound material	G631		G631
Lead frame material	C194		C194

Impacts to Data Sheet:

None

Change Impact:

None

Reason for Change:

To improve productivity by qualifying ASE as new assembly site

Change Implementation Status:

In Progress

Estimated Qualification Completion Date:

October 2018

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 2018					🕮♋♑❐	October 2018				
Workweek	31	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 22, 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_KSRA-09NUVS538_Qual_Plan.pdf

Please contact your local Microchip sales office with questions or concerns regarding this notification.

Terms and Conditions:

If you wish to change your product/process change notification (PCN) profile please log on to our website at http://www.microchip.com/PCN sign into myMICROCHIP to open the myMICROCHIP home page, then select a profile option from the left navigation bar.

To opt out of future offer or information emails (other than product change notification emails), click here to go to microchipDIRECT and login, then click on the "My account" link, click on "Update profile" and un-check the box that states "Future offers or information about Microchip's products or services."

Affected Catalog Part Numbers (CPN)

KSZ8041NL
KSZ8041NLI
KSZ8041NLI-TR
KSZ8041NLJ-TR
KSZ8041NL-TR
KSZ8041RNL
KSZ8041RNLI
KSZ8041RNLI-TR
KSZ8041RNL-TR
SPNY801052-TR
SPNY801165
SPNY801165-TR
SPNY801167
SPNY801167-TR
SPNZ801034-TR
SPNZ801050-TR
SPNZ801052-TR
SPNZ801059
SPNZ801059-TR
SPNZ801111-TR
SPNZ801165
SPNZ801165-TR
SPNZ801166
SPNZ801166-TR
SPNZ801167
SPNZ801167-TR

QUALIFICATION PLAN SUMMARY

PCN#: KSRA-09NUVS538

Date:
August 7, 2018

Qualification of ASE as a new assembly site for selected Micrel products available in 32L VQFN package using palladium coated copper with gold flash (CuPdAu) bond wire

Purpose: Qualification of ASE as a new assembly site for selected Micrel products available in 32L VQFN package using palladium coated copper with gold flash (CuPdAu) bond wire

CCB No.: 2881

Misc.	**Assembly site**	ASE
	BD Number	AAH@A226260030-0
	MP Code (MPC)	TKDA1SPFAB02
	Part Number (CPN)	KSZ8041NL
Lead-Frame	**Paddle size**	3.70 mm x 3.70 mm
	Material	C194
	Surface	Double Ring plating
	Treatment	Non-Rough
	Process	Etch
	Lead-lock	No
	Part Number	A22626-0
	Lead Plating	Sn
Bond Wire	**Material**	CuPdAu
Die Attach	**Part Number**	EN4900
	Conductive	Yes
MC	**Part Number**	G631H
PKG	**PKG Type**	VQFN
	Pin/Ball Count	32 LD
	PKG width/size	5.5x0.9 mm
	PKG LD Finish	Sn
	PKG MSL	2
Die	**Die Thickness**	9 mils
	Die Size	1.511 mm x 1.327 mm
	Fab Process (site)	180nm_Dongbu

Test Name	Conditions	Sample Size	Min. Qty of Spares per Lot (should be properly	Qty of Lots	Total Units	Fail Accept Qty	Est. Dur. Days	Special Instructions
Standard Pb-free Solderability	JESD22B-102E; Perform 8 hour steam aging for Matte tin finish and 1 hour steam aging .	22	5	1	27	> 95% lead coverage	5	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.
Wire Bond Pull - WBP	Mil. Std. 883-2011	5	0	3	24	0 fails after TC	5	30 bonds from a minimum of 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	5	0	3	24		5	30 bonds from a minimum of 5 devices.
Bond Line Thickness (BLT) robustness assessment		5	1	3	15	>0.5 mils		
Wire Sweep		5	0	3	15	0		Required for any reduction in wire bond thickness.
Physical Dimensions	Measure per JESD22 B100 and B108	10	0	3	30	0	5	-
Lead Integrity	JESD22 B105	5	0	1	5	0 (No lead breakage or cracks)	5	10 leads from each of 5 parts. Not required for SMD, only required for through-hole.
External Visual	Mil. Std. 883-2009/2010	All devices prior to submission for qualification testing	0	3	ALL	0	5	
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-020D for package type; Electrical test pre and post stress at +25°C. MSL- 2 @ 260°C	231	15	3	738	0	15	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, 192 hours Electrical test pre and post stress at +25°C	77	5	3	246	0	10	
Unbiased HAST	+130°C/85% RH for 96 hrs,, Electrical test pre and post stress at +25°C.	77	5	3	246	0	10	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.	77	5	3	246	0	15	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.

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SPNY801167
SPNY801167-TR
SPNZ801034-TR
SPNZ801050-TR
SPNZ801052-TR
SPNZ801059
SPNZ801059-TR
SPNZ801111-TR
SPNZ801165
SPNZ801165-TR
SPNZ801166
SPNZ801166-TR
SPNZ801167
SPNZ801167-TR