



Product Change Notification - KSRA-12OKOU411

Date:

07 Nov 2019

Product Category:

Ethernet Switches

Affected CPNs:**Notification subject:**

CCB 3372 Final Notice: Qualification of ASE as a new assembly site for Micrel KSZ87XX device families available in 80L LQFP (10x10x1.4mm) package using palladium coated copper with gold flash (CuPdAu) bond wire.

Notification text:**PCN Status:**

Final 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 Micrel KSZ87XX device families available in 80L LQFP (10x10x1.4mm) package using palladium coated copper with gold flash (CuPdAu) bond wire.

Pre Change:

Assembled at T1CP using copper (Cu) bond wire and 1710A die attach material

Post Change:

Assembled at ASE using palladium coated copper with gold flash (CuPdAu) bond wire and CRM-1076WA die attach material

Pre and Post Change Summary:

	Pre Change	Post Change
Assembly Site	Taiwan IC Packing Corp (TICP)	ASE Inc. Taiwan (ASE)
Wire material	Cu	CuPdAu
Die attach material	1710A	CRM-1076WA
Molding compound material	G631	G631
Lead frame material	C7025	C7025
Die Thickness	10 mils	14mils

Impacts to Data Sheet:

None

Change Impact:



None

Reason for Change:

To improve on-time delivery performance by qualifying ASE as a new assembly site.

Change Implementation Status:

In Progress

Estimated First Ship Date:

January 1, 2020 (date code: 2001)

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

Time Table Summary:

	August 2018					-->	November 2019					-->	January 2020				
Workweek	31	32	33	34	35		44	45	46	47	48		1	2	3	4	5
Initial PCN Issue Date			X														
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:

August 16, 2018: Issued initial notification.

November 1, 2018: Issued final notification. Attached the qualification report. Provided estimated first ship date to be on January 1, 2019.

November 7, 2019: Re-issued final notification. Updated the estimated first ship date which is on January 1, 2020.

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-12OKOU411_Qual Report.pdf](#)

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Affected Catalog Part Numbers (CPN)

KSZ8765CLXCC

KSZ8765CLXIC

KSZ8775CLXCC

KSZ8775CLXIC

KSZ8795CLXCC

KSZ8795CLXIC



Qualification Report Summary

PCN #: KSRA-12OKOU411

**Date:
October 16, 2019**

**Qualification of ASE as a new assembly site for Micrel
KSZ87XX device families available in 80L LQFP
(10x10x1.4mm) package using palladium coated copper with
gold flash (CuPdAu) bond wire.**

Purpose:

Qualification of ASE as a new assembly site for Micrel KSZ87XX device families available in 80L LQFP (10x10x1.4mm) package using palladium coated copper with gold flash (CuPdAu) bond wire.

I. Summary:

The purpose of this report is to qualify Mask SADA1 (KSZ8795CLXIC) in LQFP 10x10x1.4 mm, 80 LD package using CuPdAu Wire Bonding Process at ASE, per CCB# 3372, following guidelines established in Microchip specification QCI-39000, "Worldwide Quality Conformance Requirements".

II. Conclusion:

Based on the results, mask SADA1 (KSZ8795CLXIC) in LQFP 10x10x1.4 mm, 80 LD package using CuPdAu Wire Bonding Process at ASE, complies with the reliability guidelines implemented in the qualification plan. Therefore, this part/package can be released to production.

III. Device Description:

Device	KSZ8795CLXIC
MPC	SADA17CGAA03
Mask	SADA1
Process	SMIC 65nm
Document Control Number	ML1020190051
Document Revision	A
CCB No.	3372

IV. Qualification Material:

Test Lot	Lot 1	Lot 2	Lot 3
WAFER LOT	SCB1919033673.200/ EP5683	SCB1919033673.200/ EP5683	SCB1919033673.200/ EP5683
ASSEMBLY LOT	ASE192600008.000	ASE192600009.000	ASE192600010.000
PACKAGE	80L-LQFP 10x10x1.4mm	80L-LQFP 10x10x1.4mm	80L-LQFP 10x10x1.4mm
QUAL TESTS	PRECOND, HTSL, HAST, UHAST, TC	PRECOND, HAST, UHAST, TC	PRECOND, HAST, UHAST, TC

V. Bill of Materials:

		New
Misc.	Assembly site	ASEK
	BD Number	AAH@A116750126-0
	MP Code (MPC)	SADA17CGAA03
	Part Number (CPN)	KSZ8795CLXIC
Lead-Frame	Paddle size	5.08x5.08 mm

	Material	C7025
	Process	Stamped
	Plating Type	Ag D-Ring
	Part Number	A11675-0
Bond Wire	Material	CuPdAu
Die Attach	Part Number	CRM-1076WA
	Conductive	Yes
MC	Part Number	EME-G631H
PKG	PKG Type	LQFP
	PKG width/size	10x10x1.4 mm
	Pin/Ball Count	80
	MSL	3
	Lead Finish	Sn
Die	Die Thickness	14mils
	Die Size	2.57x2.26 mm
	Fab Process (site)	SMIC 12 / 65nm

IV. Qualification Data:

Package Preconditioning

Test Method/Condition	JEDEC J-STD-020D and JESD22-A113F, MSL Level 3 soak and 260oC peak Reflow Temperature Min SS=231 units
Lot #	Results (Fail/Pass)
Lot 1	0/260
Lot 2	0/255
Lot 3	0/255

Pre and Post testing was conducted at +25°C

HAST (Highly Accelerated Temperature and Humidity Stress Test)

Test Method/Condition	JESD22-A110, Vin = +3.3V, Ta = +130°C/85%RH, 96 HRS & 192 HRS Min SS = 77 units
Lot #	Results (Fail/Pass)
Lot 1	0/82 @ 96 hrs and 0/82 @ 192hrs
Lot 2	0/82 @ 96 hrs and 0/82 @ 192hrs
Lot 3	0/82 @ 96 hrs and 0/82 @ 192hrs

Pre and Post testing was conducted at +25°C, +85°C

UNBIASED HAST

Test Method/Condition	JESD22-A118, Ta = +130°C/85%RH, 96HRS Min SS = 77 units
Lot #	Results (Fail/Pass)
Lot 1	0/82 @ 96 hrs and 0/82 @ 192hrs

Lot 2	0/82 @ 96 hrs and 0/82 @ 192hrs
Lot 3	0/82 @ 96 hrs and 0/82 @ 192hrs

Post testing was conducted at +25°C

Temperature Cycling

Test Method/Condition	JESD22-A104, Ta = - 65°C /+ 150 °C, 500 CYC and 1000 CYC Min SS = 77 units
Lot #	Results (Fail/Pass)
Lot 1	0/82 @ 500 cycles 0/82 @ 1000 cycles ;WBP: 0 fail/5 after TCY
Lot 2	0/82 @ 500 cycles 0/82 @ 1000 cycles
Lot 3	0/79 @ 500 cycles 0/79 @ 1000 cycles

Pre and Post testing was conducted at +85°C

High Temperature Storage Life

Test Method/Condition	JESD22-A103, Ta = +150°C, 1000 HRS Min SS = 45 units
Lot #	Results (Fail/Pass)
Lot 1	0/50 @ 1008hrs

Pre and Post testing was conducted at +25°C, +85°C

V. Wire Pull/Ball Shear

Lot #1:

Test Item	Sample Size	Comment
Wire Pull	200 wires	Pass
Ball Shear	100 balls	Pass
Solderability	22	Pass

Lot #2

Test Item	Sample Size	Comment
Wire Pull	200 wires	Pass
Ball Shear	100 balls	Pass
Solderability	22	Pass

Lot #3

Test Item	Sample Size	Comment
Wire Pull	200 wires	Pass

Ball Shear	100 balls	Pass
Solderability	22	Pass

VI. Dimension:

Test Method/Condition	JESD22 -B100 and B108, Min SS = 10 units/lot
Lot #	Results (Fail/Pass)
Lot 1	0/30 PASS
Lot 2	0/30 PASS
Lot 3	0/30 PASS