



## Product Change Notification - GBNG-28EECP833

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**Date:**

10 Apr 2019

**Product Category:**

Ethernet Switches; Ethernet Controllers

**Affected CPNs:****Notification subject:**

CCB 3438 Final Notice: Qualification of ASE as a new assembly site for selected Micrel products available in 64L LQFP (10X10X1.4 mm) package.

**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 selected Micrel products available in 64L LQFP (10X10X1.4 mm) package.

**Pre Change:**

Assembled at Taiwan IC Packing Corp (TICP) using EN4900 die attach and CEL-9200 mold compound material.

**Post Change:**

Assembled at ASE INC. (ASE) using CRM-1076WA die attach and EME-G631 mold compound material

**Pre and Post Change Summary:**

	Pre Change	Post Change
Assembly Site	Taiwan IC Packing Corp. (TICP)	ASE Inc. (ASE)
Wire material	Au	Au
Die attach material	EN4900	CRM-1076WA
Molding compound material	CEL 9200	EME-G631H
Lead frame material	C7025	C7025

**Impacts to Data Sheet:**

None

**Change Impact:**

None

**Reason for Change:**

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

**Change Implementation Status:**

In Progress

**Estimated First Ship Date:**



May 10, 2019 (date code: 1919)

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

**Time Table Summary:**

	July 2018					-->	April 2019				May 2019					
Workweek	27	28	29	30	31		14	15	16	17	18	19	20	21	22	
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:**

**July 03, 2018:** Issued initial notification.

**April 10, 2019:** Issued final notification. Attached the Qualification Report. Provided estimated first ship date on May 10, 2019.

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\\_GBNG-28EECP833\\_Qual\\_Report.pdf](#)

Please contact your local [Microchip sales office](#) with questions or concerns regarding this notification.

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Affected Catalog Part Numbers (CPN)

KSZ8441FHLL

KSZ8441HLL

KSZ8462FHLL

KSZ8462HLL

KSZ8463FMLL

KSZ8463FRLl

KSZ8463MLl

KSZ8463RLl



**QUALIFICATION REPORT SUMMARY**  
RELIABILITY LABORATORY

**PCN #: GBNG-28EECP833**

**Date:**  
**March 21, 2019**

**Qualification of ASE as a new assembly site for selected Micrel products available in 64L LQFP (10X10X1.4 mm) package.**

**Purpose: Qualification of ASE as a new assembly site for selected Micrel products available in 64L LQFP (10X10X1.4 mm) package.**

**I. Summary:**

The purpose of this report is to qualify XKBA1(KSZ8463XXX) in LQFP 10x10x 1.4 mm, 64 LD package at ASE, per CCB# 3438, and guidelines established in Microchip specification QCI-39000, "Worldwide Quality Conformance Requirements".

**II. Conclusion:**

Based on the results, XKBA1 products in LQFP 10x10x1.4 mm, 64 LD package at ASE package complies with the reliability guidelines implemented in the qualification plan. Therefore, the LQFP 10x10x1.4 mm, 64L from ASE qualified for XKBA1 products.

**III. Device Description:**

<b>Device</b>	KSZ8463MLI
<b>MPC</b>	XKBA17CEAA07
<b>Document Control Number</b>	ML032019009K
<b>Document Revision</b>	A
<b>CCB No</b>	3438

**IV. Qualification Material:**

<b>Test Lot</b>	<b>Lot 1</b>	<b>Lot 2</b>	<b>Lot 3</b>
<b>ASSEMBLY LOT</b>	ASE192200176.000	ASE192200177.000	ASE192200178.000
<b>PACKAGE</b>	64L-LQFP 10x00x 1.4mm	64L-LQFP 10x00x 1.4mm	64L-LQFP 10x00x 1.4mm
<b>QUAL TESTS</b>	PRECOND, HTSL, HAST, UHAST, TC	PRECOND, HAST, UHAST, TC	PRECOND, HAST, UHAST, TC

**V. Bill of Materials:**

<b><u>Misc.</u></b>	<b>Assembly site</b>	ASE
	<b>BD Number</b>	ENG_KSZ8463MLI-AI-4-X0
	<b>MP Code (MPC)</b>	XKBA17CEAA07
	<b>Part Number (CPN)</b>	KSZ8463MLI
<b><u>Lead-Frame</u></b>	<b>Paddle size</b>	5.08x5.08
	<b>Material</b>	C7025
	<b>Inner Plating</b>	AG (Double ring plating)
	<b>Surface Treatment</b>	Non-Rough
	<b>Process</b>	Stamped
	<b>Lead-lock</b>	No
	<b>Part Number</b>	A08031-A

<b><u>Bond Wire</u></b>	<b>Material</b>	Au
<b><u>MC</u></b>	<b>Part Number</b>	EME-G631H
<b><u>PKG</u></b>	<b>PKG Type</b>	LQFP
	<b>Pin/Ball Count</b>	64 LD
	<b>PKG width/size</b>	10 x 10 x1.4 mm
	<b>PKG LD Finish</b>	Sn
	<b>PKG MSL</b>	3
<b><u>Die</u></b>	<b>Die Thickness</b>	14 mils
	<b>Die Size</b>	2.819 um x 2.819 um
	<b>Fab Process (site)</b>	DongBu / 0.11 um

## VI. Qualification Data:

### Package Preconditioning

Test Method/Condition	JEDEC J-STD-020D and JESD22-A113F, MSL Level 3 soak and 260°C peak Reflow Temperature
Lot #	Results (Fail/Pass)
Lot 1	0/244
Lot 2	0/244
Lot 3	0/244

### HAST (Highly Accelerated Temperature and Humidity Stress Test)

Test Method/Condition	JESD22-A110, Vin = +3.3V, Ta = +130°C/85%RH, 96 HRS Min SS = 77 units
Lot #	Results (Fail/Pass)
Lot 1	0/80 @ 96 hrs
Lot 2	0/80 @ 96 hrs
Lot 3	0/80 @ 96 hrs

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

Post testing was conducted at +25°C

### Temperature Cycling

Test Method/Condition	JESD22-A104, Ta = -65°C/+150 °C, 500 CYC Min SS = 77 units
Lot #	Results (Fail/Pass)
Lot 1	0/82 @ 500 cycles
Lot 2	0/82 @ 500 cycles
Lot 3	0/82 @ 500 cycles

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

### High Temperature Storage Life

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

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

### Wire Pull/Ball Shear

#### Lot #1:

Test Item	Sample Size/ Unit	Comment
Wire Pull	200 wires	Pass
Ball Shear	100 balls	Pass
Solderability	11	Pass

#### Lot #2

Test Item	Sample Size/ Unit	Comment
Wire Pull	200 wires	Pass
Ball Shear	100 balls	Pass
Solderability	11	Pass

#### Lot #3

Test Item	Sample Size/ Unit	Comment
Wire Pull	200 wires	Pass
Ball Shear	100 balls	Pass
Solderability	11	Pass

### Physical 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