



## Product Change Notification - LIAL-11DISH151

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**Date:**

22 Mar 2019

**Product Category:**

Ethernet Switches; Ethernet Controllers

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

CCB 3733 Initial Notice: Qualification of ASE as a new assembly site for selected Micrel products of KSZ88XX device families available in 128L LQFP (14x14x1.4mm) package

**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 of KSZ88XX device families available in 128L LQFP (14x14x1.4mm) package.

**Pre Change:**

Assembled at OSE using 8340 die attach and CEL-9200HF mold compound material

**Post Change:**

Assembled at ASE using EN-4900G die attach and EME-G631H mold compound material

**Pre and Post Change Summary:**

	<b>Pre Change</b>	<b>Post Change</b>
<b>Assembly Site</b>	Orient Semiconductor Electronics, Ltd (OSE)	ASE Inc. (ASE)
<b>Wire material</b>	Au	Au
<b>Die attach material</b>	8340	EN-4900G
<b>Molding compound material</b>	CEL-9200HF	EME-G631H
<b>Lead frame material</b>	C7025	C7025
<b>Die attach paddle</b>	Spot	Double Ring

**Impacts to Data Sheet:**

None

**Change Impact:**



None

**Reason for Change:**

To improve productivity by qualifying ASE as a new assembly site

**Change Implementation Status:**

In Progress

**Estimated Qualification Completion Date:**

June 2019

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:**

	March 2019					->	June 2019				
Workweek	09	10	11	12	13		22	23	24	25	26
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:**

**March 22, 2019:** 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\\_LIAL-11DISH151\\_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.

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**MICROCHIP**

**QUALIFICATION PLAN SUMMARY**

**PCN #: LIAL-11DISH151**

**Date**

**February 21, 2019**

**Qualification of ASE as a new assembly site for selected Micrel products of KSZ88XX device families available in 128L LQFP (14x14x1.4mm) package**

**Purpose:** Qualification of ASE as a new assembly site for selected Micrel products of KSZ88XX device families available in 128L LQFP (14x14x1.4mm) package

**CCB No.:** 3733

		Qualification Report
<b>Miscellaneous</b>	<b>Assembly site</b>	ASE
	<b>BD Number</b>	AAH@A080170282-0
	<b>MP Code (MPC)</b>	TARA17J5XA01
	<b>Part Number (CPN)</b>	KSZ8841-16MVL1
<b>Lead-Frame</b>	<b>Paddle size</b>	240x240
	<b>Material</b>	C7025
	<b>DAP Surface Prep (Spot/Ring/DRP)</b>	Double Ring
	<b>Treatment (roughened/ brown oxide(BOT) /micro-etched/ none)</b>	None
	<b>Process (stamped/Etched)</b>	Stamped
	<b>Lead-lock (Y/N)</b>	No
	<b>Part Number</b>	1100336121
	<b>Lead Plating (Matte Sn, SnPb, PPF)</b>	Matte Sn
	<b>Strip Size</b>	70x250 mm
	<b>Strip Density</b>	30 units/strip
<b>Bond Wire</b>	<b>Material</b>	Au
<b>Die Attach</b>	<b>Part Number</b>	EN-4900G
	<b>Conductive</b>	Yes
<b>Mold Compound</b>	<b>Part Number</b>	EME-G631H
<b>PKG</b>	<b>PKG Type</b>	LQFP
	<b>Pin/Ball Count</b>	128
	<b>PKG width/size</b>	14x14x1.4mm
<b>Die</b>	<b>Die Thickness</b>	14
	<b>Die Size</b>	120x190
	<b>Fab Process (site)</b>	TSMC 0.15um

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	Special Instructions
Standard Pb-free Solderability	J-STD-002D ; Perform 8 hour steam aging for Matte tin finish and 1 hour steam aging for NiPdAu finish prior to testing.  Standard Pb-free: Matte tin/ NiPdAu finish, SAC solder, wetting temp 245°C for both SMD & through hole packages.	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	1	5	0 fails after TC	5	30 bonds from a min. 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	5	0	1	5	0	5	30 bonds from a min. 5 devices.
Physical Dimensions	Measure per JESD22 B100 and B108	10	0	3	30	0	5	
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-020E for package type; Electrical test pre and post stress at +25°C.  MSL3 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.
UHAST	+130°C/85% RH for 96 hrs Electrical test pre and post stress at +25°	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 grams 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.

Affected Catalog Part Numbers (CPN)

KSZ8841-16MVL  
KSZ8841-16MVLI  
KSZ8841-16MVLI-TR  
KSZ8841-16MVL-TR  
KSZ8841-32MVL  
KSZ8841-32MVLI  
KSZ8842-16MVL  
KSZ8842-16MVLI  
KSZ8842-16MVLI-TR  
KSZ8842-16MVL-TR  
KSZ8842-32MVL  
KSZ8842-32MVLI