



Product Change Notification - LIAL-31DUML707

Date:

02 Apr 2019

Product Category:

Ethernet PHYs; Others

Affected CPNs:**Notification subject:**

CCB 3771 Initial Notice: Qualification of GTK as a new assembly site for selected Micrel KSZ87XX device family available in 48L SSOP (15.8x7.6mm) 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 GTK as a new assembly site for selected Micrel KSZ87XX device family available in 48L SSOP (15.8x7.6mm) package

Pre Change:

Assembled at OSE using 8340 die attach, CEL-9220HF mold compound and C7025 lead frame material

Post Change:

Assembled at GTK using EN-4900GC die attach, G600F mold compound and A194 lead frame material

Pre and Post Change Summary:

		Pre Change	Post Change
Assembly Site		Orient Semiconductor Electronics, Ltd (OSE)	GREATEK ELETRONIC INC. (GTK)
Wire material		Au	Au
Die attach material	Bottom die	8340	EN-4900GC
	Top die*	QMI-550	HR-5104
Molding compound material		CEL-9220HF	G600F
Lead frame material		C7025	A194

*applicable only for multi-die products.



Impacts to Data Sheet:

None

Change Impact:

None

Reason for Change:

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

Change Implementation Status:

In Progress

Estimated Qualification Completion Date:

August 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:

	April 2019					-->	August 2019				
Workweek	14	15	16	17	18		31	32	33	34	35
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:

April 2, 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-31DUML707 QUAL PLAN.pdf](#)

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

Terms and Conditions:

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[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.

Affected Catalog Part Numbers (CPN)

KSZ8721B
KSZ8721BI
KSZ8721BI-TR
KSZ8721B-TR
KSZ8721SL
KSZ8721SLI
KSZ8721SLI-TR
KSZ8721SL-TR
SPNZ801026-TR
SPNZ801027-TR



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QUALIFICATION PLAN SUMMARY

PCN #: LIAL-31DUML707

Date

March 20, 2019

**Qualification of GTK as a new assembly site for selected Micrel
KSZ87XX device family available in 48L SSOP (15.8x7.6mm)
package.**

Purpose: Qualification of GTK as a new assembly site for selected Micrel KSZ87XX device family available in 48L SSOP (15.8x7.6mm) package.

CCB No.: 3771

		New Data (new Qual)
Miscellaneous	Assembly site	GTK
	BD Number	GTK1903155A
	MP Code (MPC)	360631E6AA01
	Part Number (CPN)	KSZ8721SL
	CCB No.	3771
Lead-Frame	Paddle size	150x150mil
	Material	A194
	DAP Surface Prep (Spot/Ring/DRP)	Double Ring
	Treatment (roughened/ brown oxide (BOT) /micro-etched/ none)	None
	Process (stamped/Etched)	Stamped
	Lead-lock (Y/N)	No
	Part Number	11-0248W-004
	Lead Plating (Matte Sn, SnPb, PPF)	Matte Sn
	Strip Size	213.06*58.42
	Strip Density	40units (4x10)
Bond Wire	Material	Au
Die Attach	Part Number (Bottom Die)	EN-4900GC
	Conductive	Yes
	Part Number (Top Die)	HR-5104
	Conductive	No
Mold Compound	Part Number	G600F
PKG	PKG Type	SSOP
	Pin/Ball Count	48
	PKG width/size	15.8x7.6mm
Die	Die Thickness (Bottom Die)	8 mils
	Die Size	78.71 x 84.21
	Fab Process (site)	TSMC 0.25um
	Die Thickness (Top Die)	8 mils
	Die Size	38.98 x 46.06
	Fab Process (site)	TMPE_NON_150K

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.

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
HAST	+130°C/85% RH for 96 hours or 110°C/85%RH for 264 hours. Electrical test pre and post stress at +25°C and hot temp.	77	5	3	246	0	10	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
UHAST	+130°C/85% RH for 96 hrs or +110°C/85% RH for 264 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.