



## Product Change Notification / ALAN-210WUD950

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**Date:**

24-Aug-2023

**Product Category:**

Linear Regulators

**PCN Type:**

Manufacturing Change

**Notification Subject:**

CCB 6511 Initial Notice: Qualification of HANA as an additional assembly site for selected TC2117xx and MCP182xSUTxx device families available in 3L SOT-223 package.

**Affected CPNs:**

[ALAN-210WUD950\\_Affected\\_CPN\\_08242023.pdf](#)  
[ALAN-210WUD950\\_Affected\\_CPN\\_08242023.csv](#)

**Notification Text:**

**PCN Status:**Initial Notification

**PCN Type:**Manufacturing Change

**Microchip Parts Affected:**Please open one of the files found in the Affected CPNs section.  
Note: For your convenience Microchip includes identical files in two formats (.pdf and .xls)

**Description of Change:**Qualification of HANA as an additional assembly site for selected TC2117xx and MCP182xSUTxx device families available in 3L SOT-223 package.

**Pre and Post Change Summary:**

	Pre Change	Post Change	
Assembly Site	Lingsen Precision	Lingsen Precision	Hana Semiconductor

	Industries, LTD. (LPI)	Industries, LTD. (LPI)	CO., LTD. (HANA)
Wire Material	Au	Au	Au
Die Attach Material	84-3J	84-3J	8006NS
Molding Compound Material	G600	G600	G600
Lead-Frame Material	PMC	PMC	C194
Lead-Frame Paddle Size	118x97mils	118x97mils	100x87mils

**Impacts to Data Sheet:**None

**Change Impact:**None

**Reason for Change:**To improve on-time delivery performance by qualifying HANA as an additional assembly site.

**Change Implementation Status:**In Progress

**Estimated Qualification Completion Date:**January 2024

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 2023					>	January 2024				
Workweek	3 1	3 2	3 3	3 4	3 5		1	2	3	4	5
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 24, 2023: 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.

### **Attachments:**

[PCN\\_ALAN-210WUD950 Pre\\_and\\_Post\\_Change Summary.pdf](#)

[PCN\\_ALAN-210WUD950 Qualification 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.

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)

MCP1825SUT-1202E/DB

MCP1824SUT-1202E/DB

TC2117-1.8VDB

TC2117-3.0VDB

TC2117-3.3VDB

TC2117-1.8VDBTR

TC2117-2.5VDBTR

TC2117-3.0VDBTR

TC2117-3.3VDBTR



**MICROCHIP**

# **QUALIFICATION PLAN SUMMARY**

**PCN#: ALAN-21OWUD950**

**Date:**

**August 17, 2023**

**Qualification of HANA as an additional assembly site for selected TC2117xx and MCP182xSUTxx device families available in 3L SOT-223 package.**

**Purpose:** Qualification of HANA as an additional assembly site for selected TC2117xx and MCP182xSUTxx device families available in 3L SOT-223 package.

**CCB#:** 6511

<u>Misc.</u>	Assembly site	HANA
	BD Number	BD-001685-02
	MP Code (MPC)	GBAC5YF6XC33
	Part Number (CPN)	TC2117-3.3VDBTR
	MSL information	MSL1, 260
	Assembly Shipping Media (T/R, Tube/Tray)	Canister
	Base Quantity Multiple (BQM)	4,000
	Reliability Site	MTAI
<u>Lead-Frame</u>	Paddle size	100x87mils
	Material	C194
	DAP Surface Prep	Ring Ag
	Treatment	Rough (BOT)
	Process	Stamp
	Lead-lock	No
	Part Number	134760B
	Lead Plating	MatteSn
	Strip Size	79x250
	Strip Density	256
<u>Bond Wire</u>	Material	Au
<u>Backside Coat</u>	Part Number	8006NS
	Conductive	No
<u>Die Attach</u>	Part Number	8006NS
	Conductive	No
<u>MC</u>	Part Number	G600
<u>PKG</u>	Package Type	SOT-223
	Pin/Ball Count	3

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	ATE Test Site	REL Test Site	Pkg. Type	Special Instructions
Standard Pb-free Solderability	J-STD-002D ; Perform 8 hour steam aging for Matte tin finish 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	MTAI	MTAI	SOT-223	Standard Pb-free solderability is the requirement.
Backward Solderability	J-STD-002D ;Perform 8 hours steam aging for Matte tin finish Backward: Matte tin/ NiPdAu finish, SnPb solder, wetting temp 215°C for SMD.	22	5	1	27	> 95% lead coverage	5	MTAI	MTAI	SOT-223	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	5	MTAI	MTAI	SOT-223	30 bonds from a min. 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	5	0	1	5		5	MTAI	MTAI	SOT-223	30 bonds from a min. 5 devices.
Wire Sweep								HANA	HANA	SOT-223	Required for any reduction in wire bond thickness.
Physical Dimmensions	Measure per JESD22 B100 and B108	10	0	3	30		5	MTAI	MTAI	SOT-223	
External Visual	Mil. Std. 883-2009/2010	All devices prior to submission for qualification testing	0	3	ALL	0	5	MTAI	MTAI	SOT-223	
Preconditioning - Required for surface mount devices	JESD22-A113. +150°C Bake for 24 hours, moisture loading requirements per MSL level + 3X reflow at peak reflow temperature per Jeduc-STD-020E for package type; Electrical test pre and post stress at +25°C. MSL-1, 260	231	15	3	738	0	15	MTAI	MTAI	SOT-223	Spares should be properly identified. 77 parts from each lot to be used for HAST, uHAST, Temp Cycle test.
HAST	JESD22-A110. +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 +125°C.	77	5	3	246	0	10	MTAI	MTAI	SOT-223	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
UHAST	JESD22-A118. +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	MTAI	MTAI	SOT-223	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
Temp Cycle	JESD22-A104. -65°C to +150°C for 500 cycles. Electrical test pre and post stress at +125°C; 3 gram force WBP, on 5 devices from 1 lot, test following Temp Cycle stress.	77	5	3	246	0	15	MTAI	MTAI	SOT-223	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.

# CCB 6511

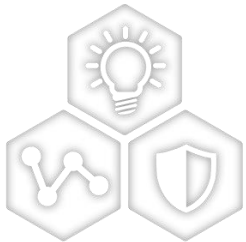
## Pre and Post Change Summary

### PCN# ALAN-210WUD950



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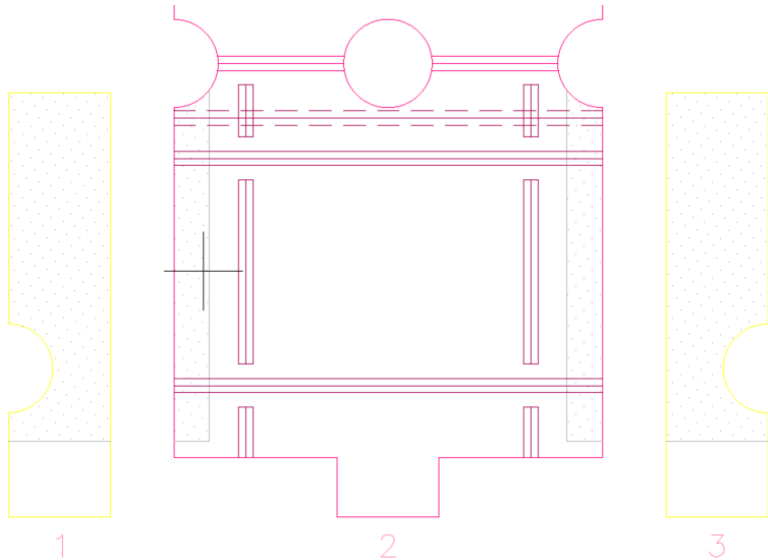


SMART | CONNECTED | SECURE



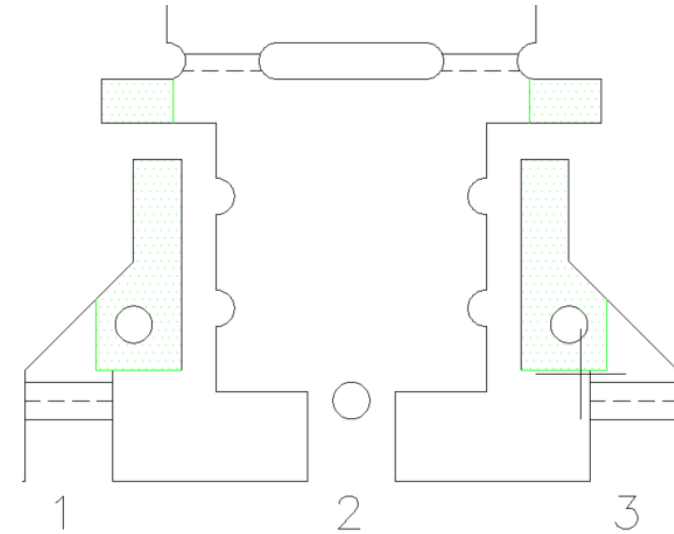
# Pre and Post Change Summary – Lead Frame Layout/Drawing Comparison

## LPI



Die Attach Material	84-3J
Lead-Frame Material	PMC
Lead-frame Paddle Size	118x97mils

## HANA



Die Attach Material	8006NS
Lead-Frame Material	C194
Lead-frame Paddle Size	100x87mils

\*Note: Not fit to scale