



Product Change Notification / BLAS-29UKEN164

Date:

02-Aug-2024

Product Category:

Linear Regulators

PCN Type:

Manufacturing Change

Notification Subject:

CCB 6507 Final Notice: Qualification of HANA as an additional assembly site for selected MCP1792 and MCP1799 device families available in 3L SOT-223 package.

Affected CPNs:

[BLAS-29UKEN164_Affected_CPN_08022024.pdf](#)
[BLAS-29UKEN164_Affected_CPN_08022024.csv](#)

Notification Text:

PCN Status:Final 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 MCP1792 and MCP1799 device families available in 3L SOT-223 package.

Pre and Post Change Summary:

	Pre Change	Post Change

Assembly Site	Lingsen Precision Industries, LTD. (LPI)	Lingsen Precision Industries, LTD. (LPI)	Hana Semiconductor CO., LTD. (HANA)
Wire Material	Au	Au	Au
Die Attach Material	CRM-1064L	CRM-1064L	84-1 LMISR4
Molding Compound Material	G600	G600	G600
Lead-Frame Material	PMC	PMC	C194
Lead-Frame Paddle Size	118x97mils	118x97mils	100x87mils
Lead-Frame Drawing	See attached Pre and Post Change Comparison.		

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 First Ship Date:August 15, 2024 (date code: 2433)

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

Time Table Summary:

	August 2023					>	August 2024				
Workweek	31	32	33	34	35		31	32	33	34	35
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 29, 2023: Issued initial notification.

September 06, 2023: Re-issued initial notification to correct typo error on Time Table Summary Work Week.

August 02, 2024: Issued final notification. Attached the Qualification Report. Revised notification subject and description of change to reflect the device families of affected part numbers. Provided estimated first ship date to be on August 15, 2024.

The change described in this PCN does not alter Microchip's current regulatory compliance regarding the material content of the applicable products.

Attachments:

[PCN_BLAS-29UKEN164 Qual Report.pdf](#)

[PCN_BLAS-29UKEN164 Pre and Post Change_Summary.pdf](#)

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

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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)

MCP1799-3302H/DB
MCP1799-5002H/DB
MCP1799T-3302H/DB
MCP1799T-3302H/DBVAO
MCP1799T-5002H/DB
MCP1799T-5002H/DBVAO
MCP1792-3302H/DB
MCP1792-4102H/DBVAO
MCP1792-5002H/DB
MCP1792T-3302H/DB
MCP1792T-3302H/DBVAO
MCP1792T-4102H/DB
MCP1792T-4102H/DBVAO
MCP1792T-5002H/DB
MCP1792T-5002H/DBVAO

CCB 6507

Pre and Post Change Summary

PCN# BLAS-29UKEN164



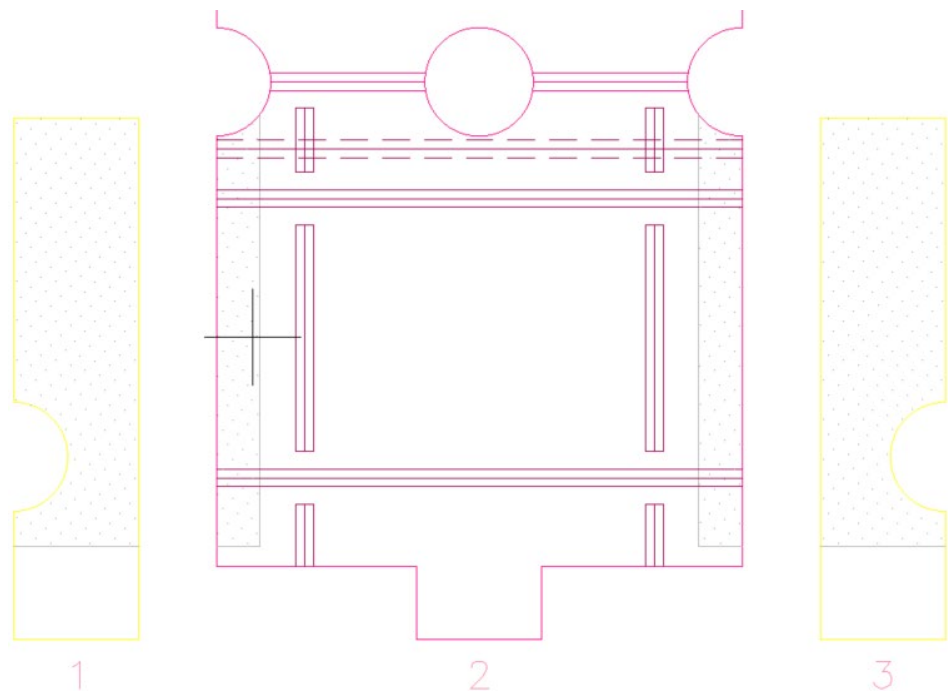
A Leading Provider of Smart, Connected and Secure Embedded Control Solutions



SMART | CONNECTED | SECURE

LEAD FRAME COMPARISON

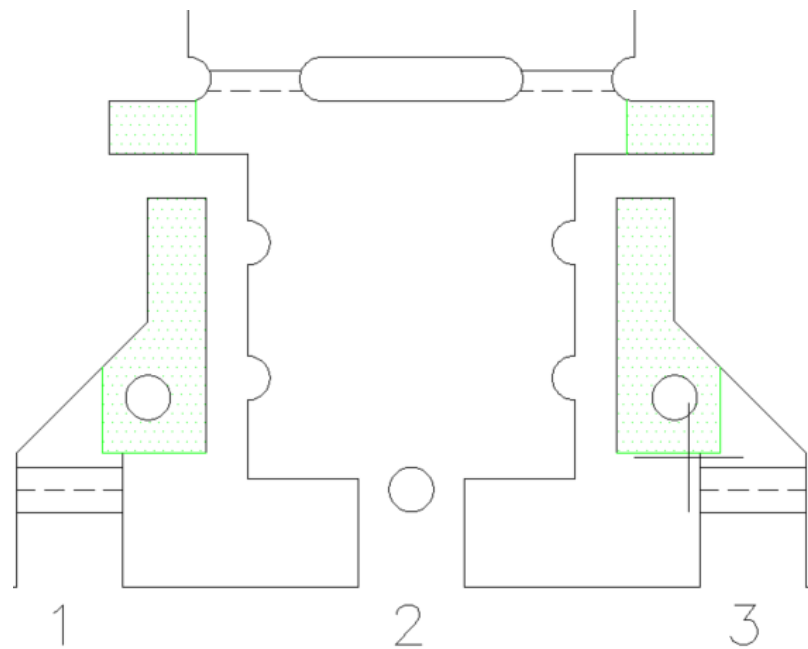
LPI



Lead-Frame Material	PMC
Lead-Frame Paddle Size	118x97mils

Note: Not to scale

HANA



Lead-Frame Material	C194
Lead-Frame Paddle Size	100x87mils

Note: Not to scale



QUALIFICATION REPORT SUMMARY
RELIABILITY LABORATORY

PCN#: BLAS-29UKEN164

Date:
July 10, 2024

**Qualification of HANA as an additional assembly site for selected
MCP1792 and MCP1799 device families available in 3L SOT-223
package.**



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PACKAGE QUALIFICATION REPORT

Purpose	Qualification of HANA as an additional assembly site for selected MCP1792 and MCP1799 device families available in 3L SOT-223 package.
CN	E000194064
QUAL ID	R2301767 Rev. A
MP CODE	VA9B1JF6XVB1
Part No.	MCP1792T-5002H/DBVAO
Bonding No.	BD-001688 Rev. 01
CCB No.	6507
<u>Package</u>	
Type	3L SOT-223
<u>Lead Frame</u>	
Paddle size	100 x 87 mils
Material	C194
Surface	Ring Ag
Process	Stamp
Lead Lock	No
Part Number	134760B
Treatment	Rough (BOT)
<u>Material</u>	
Epoxy	84-1LMISR4
Wire	Au wire
Mold Compound	G600
Plating Composition	Matte Sn



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PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
HANA242700001.000	TC08924167273.500	23406WK
HANA242700002.000	TC08924167273.500	23406WW
HANA242700003.000	TC08924167273.500	23406YC

Result

☒ Pass ☐ Fail ☐ _____

3L SOT-223 assembled by HANA pass reliability test per QCI-39000. This package was qualified the Moisture/Reflow Sensitivity Classification Level 2 at 260°C reflow temperature per IPC/JEDEC J-STD-020E standard.

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS	Result	Remarks
Precondition Prior Perform Reliability Tests (At MSL Level 2)	Electrical Test: +25°C, 85°C, 125°C and 150°C System: ETS88 Bake 150°C, 24 hrs. System: CHINEE 85°C/60%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH 3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243	JESD22-A113 JIP/IPC/JEDEC J-STD-020E	693(0)	0/693	Pass	Good Devices
	Electrical Test: +25°C, 85°C, 125°C and 150°C System: ETS88		693(0)	0/693	Pass	

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
Temp Cycle	Stress Condition: -55°C to +150°C, 1000 Cycles System: TABAI ESPEC TSA-70H Electrical Test: +85°C, 125°C and 150°C System: ETS88	JESD22-A104	231(0)	0/231		Parts had been pre-conditioned at 260°C
				0/231	Pass	77 units / lot
	Stress Condition: -55°C to +150°C, 2000 Cycles System: TABAI ESPEC TSA-70H Electrical Test: +85°C, 125°C and 150°C System: ETS88		231(0)	0/231	Pass	Parts had been pre-conditioned at 260°C 77 units / lot
	Bond Strength: Wire Pull (>5.00 grams)		15(0)	0/15	Pass	
UNBIASED-HAST	Stress Condition: +130°C/85%RH, 96 hrs. System: HAST 6000X	JESD22-A118		0/231		Parts had been pre-conditioned at 260°C
	Electrical Test: +25°C System: ETS88		231(0)	0/231	Pass	77 units / lot
HAST	Stress Condition: +130°C/85%RH, 96 hrs. Bias Volt: 35.0 Volts System: HAST 6000X	JESD22-A110		0/231		Parts had been pre-conditioned at 260°C
	Electrical Test: +25°C, 85°C, 125°C and 150°C System: ETS88		231(0)	0/231	Pass	77 units / lot

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
High Temperature Storage Life	Stress Condition: Bake 175°C, 1000 hrs. System: TPS Bake Oven	JESD22- A103		0/45		45 units
	Electrical Test: +25°C, 85°C, 125°C and 150°C System: ETS88		45(0)	0/45	Pass	
Solderability Temp 215°C	Steam Aging: Temp 93°C, 8Hrs System: SAS-3000 Solder Dipping: Solder Temp.215°C Solder material: SnPb Sn63, Pb37 System: ERSA RA 2200D Visual Inspection: External Visual Inspection	J-STD-002	22(0)	0/22		
				0/22		
				0/22	Pass	
Solderability Temp 245°C	Steam Aging: Temp 93°C, 8Hrs System: SAS-3000 Solder Dipping: Solder Temp.245°C Solder material: Pb Free Sn 95.5Ag3.9 Cu0.6 System: ERSA RA 2200D Visual Inspection: External Visual Inspection	J-STD-002	22(0)	0/22		
				0/22		
				0/22	Pass	
Physical Dimensions	Physical Dimension, 10 units / 1 lot	JESD22- B100/B108	30(0) Units	0/30	Pass	
Bond Strength Data Assembly	Wire Pull (>5.00 grams)	Mil. Std. 883-2011	30(0) Wires	0/30	Pass	
	Bond Shear (>9.86 grams)	CDF-AEC- Q100-001	30(0) bonds	0/30	Pass	