Product Change Notification / BLAS-26KOZC951

Date:

17-Apr-2024

Product Category:

Linear Regulators

PCN Type:

Manufacturing Change

Notification Subject:

CCB 6542 Final Notice: Qualification of HANA as an additional assembly site for MCP1793T-3302H/DC, MCP1793T-3302H/DCVAO, MCP1793T-4102H/DC, MCP1793T-4102H/DCVAO, MCP1793T-5002H/DC and MCP1793T-5002H/DCVAO catalog part numbers (CPN) available in 5L SOT-223 package.

Affected CPNs:

BLAS-26KOZC951_Affected_CPN_04172024.pdf
BLAS-26KOZC951_Affected_CPN_04172024.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 MCP1793T-3302H/DC, MCP1793T-3302H/DCVAO, MCP1793T-4102H/DC, MCP1793T-4102H/DCVAO, MCP1793T-5002H/DC and MCP1793T-5002H/DCVAO catalog part numbers (CPN) available in 5L 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	C194	C194	C194

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: May 15, 2024 (date code: 2420)

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

Time Table Summary:

	September 2023					**>**	**April 2024**					**May 2024**			
Workweek	35	36	37	38	39		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: September 27, 2023: Issued initial notification.
April 17, 2024: Issued final notification. Attached the Qualification Report. Provided estimated first ship date to be on May 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-26KOZC951 Pre and Post Change_Summary.pdf
PCN_BLAS-26KOZC951_Qual Report.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)

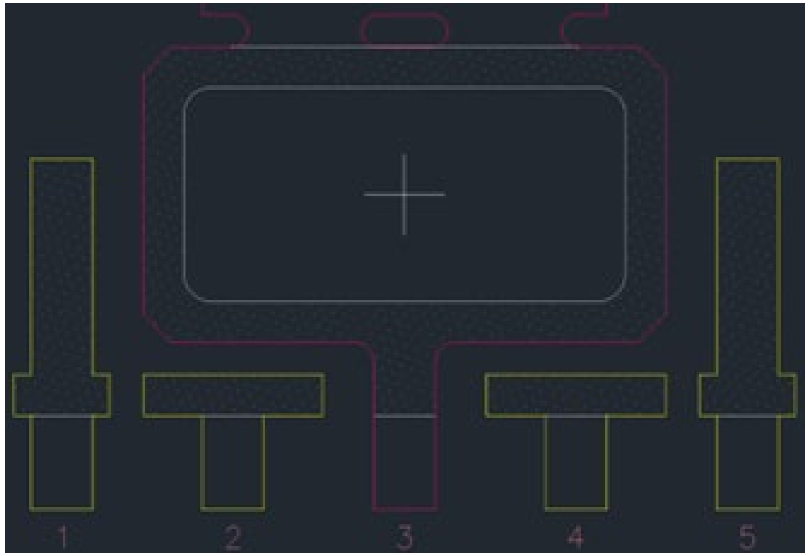
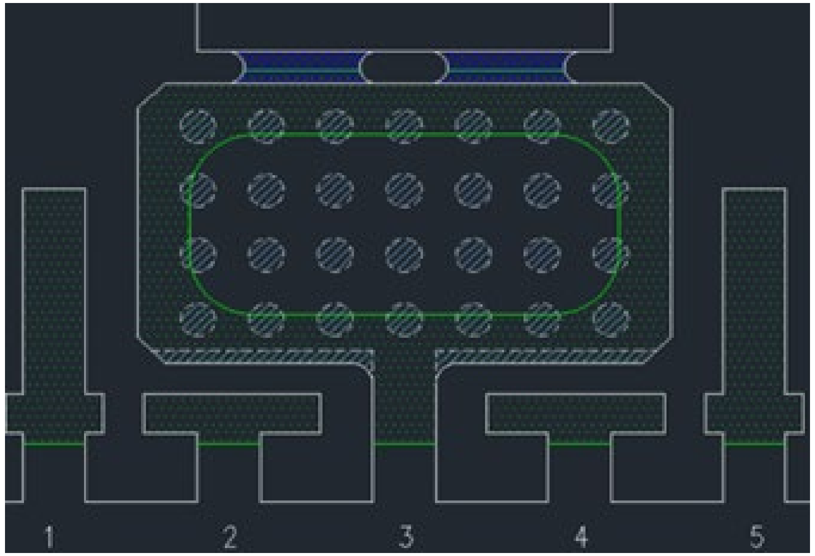
MCP1793T-3302H/DC
MCP1793T-3302H/DCVAO
MCP1793T-4102H/DC
MCP1793T-4102H/DCVAO
MCP1793T-5002H/DC
MCP1793T-5002H/DCVAO

CCB 6542
Pre and Post Change Summary
PCN# BLAS-26KOZC951

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

SMART | CONNECTED | SECURE

LEAD FRAME COMPARISON

LPI	HANA
 *Note: Not to scale*	 *Note: Not to scale*

QUALIFICATION REPORT SUMMARY

RELIABILITY LABORATORY

PCN #: BLAS-26KOZC951

Date:
April 04, 2024

Qualification of HANA as an additional assembly site for MCP1793T-3302H/DC, MCP1793T-3302H/DCVAO, MCP1793T-4102H/DC, MCP1793T-4102H/DCVAO, MCP1793T-5002H/DC and MCP1793T-5002H/DCVAO catalog part numbers (CPN) available in 5L SOT-223 package.

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PACKAGE QUALIFICATION REPORT

Purpose	Qualification of HANA as an additional assembly site for MCP1793T-3302H/DC, MCP1793T-3302H/DCVAO, MCP1793T-4102H/DC, MCP1793T-4102H/DCVAO, MCP1793T-5002H/DC and MCP1793T-5002H/DCVAO catalog part numbers (CPN) available in 5L SOT-223 package.
CN	E000196445
QUAL ID	R2301838 Rev. A
MP CODE	VA9B1JN7XVB1
Part No.	MCP1793T-5002H/DCVAO
Bonding No.	BD-001725 Rev. 01
CCB No.	6542
Package	
Type	5L SOT-223
Lead Frame	
Paddle size	152 x 86 mils
Material	C194
Surface	Ring Ag
Process	Etch
Lead Lock	No
Part Number	134761B
Treatment	Rough (BOT)
Material	
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
HANA242900004.000	TC08924167273.800	2342YWB
HANA242900005.000	TC08924167273.800	2342YWD
HANA242900006.000	TC08924167273.800	2342YWQ

Result ☒ Pass ☐ Fail ☐ ____________________

5L SOT-223 assembled by HANA pass reliability test per QCI-39000. This package qualified the Moisture/Reflow Sensitivity Classification Level 1 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 1)	**Electrical Test:** +25°C, 85°C, 125°C and 150°C System: ETS88	JESD22-A113	693(0)	0/693		Good Devices
	Bake 150°C, 24 hrs. System: CHINEE	JIP/ IPC/JEDEC J-STD-020E		693		
	85°C/85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH			693		
	3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243			693		
	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	JESD22-A104		0/231		Parts had been pre-conditioned at 260°C
	Electrical Test: +85°C, 125°C and 150°C System: ETS88		231(0)	0/231	Pass	77 units / lot
	Stress Condition: -55°C to +150°C, 2000 Cycles System: TABAI ESPEC TSA-70H			0/231		
	Electrical Test: +85°C, 125°C and 150°C System: ETS88		231(0)	0/231	Pass	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 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 **Electrical Test:** +25°C, 85°C, 125°C and 150°C System: ETS88	JESD22-A103	45(0)	0/45 0/45	Pass	45 units
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	