



Product Change Notification / BLAS-30BRVK558

Date:

31-Jul-2023

Product Category:

AC/DC - Offline Linear Regulators, Depletion Mode MOSFETs, Fault Protection ICs, General Purpose LED Drivers, Linear Regulator ICs, Ultrasound T/R Switch ICs

PCN Type:

Manufacturing Change

Notification Subject:

CCB 6431 Initial Notice: Qualification of GTBF as an additional assembly site for selected CL1N8-G, CL25N8-G, CL2N8-G, FP0100N8-G, HV9921N8-G, HV9922N8-G, HV9923N8-G, LND150N8-G, LR645N8-G, LR745N8-G, LR8N8-G and MD0100N8-G catalog part numbers (CPN) available in 3L SOT-89 package.

Affected CPNs:

[BLAS-30BRVK558_Affected_CPN_07312023.pdf](#)

[BLAS-30BRVK558_Affected_CPN_07312023.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 GTBF as an additional assembly site for selected CL1N8-G, CL25N8-G, CL2N8-G, FP0100N8-G, HV9921N8-G, HV9922N8-G, HV9923N8-G, LND150N8-G, LR645N8-G, LR745N8-G, LR8N8-G and MD0100N8-G catalog part numbers (CPN) available in 3L SOT-89 package.

Pre and Post Change Summary:

	Pre Change	Post Change	
Assembly Site	Lingsen Precision Industries, LTD. (LPI)	Lingsen Precision Industries, LTD. (LPI)	Great Team Backend Foundry (Dong Guan) Ltd. (GTBF)
Wire Material	Au	Au	Au
Die Attach Material	8060T	8060T	CRM-1800
Molding Compound Material	G600	G600	CEL-9240HF10L8
Lead-Frame Material	KFC	KFC	KFC/LY89
Lead-Frame Paddle Size	79x63mils	79x63mils	71x79mils
	See attached Pre and Post Change comparison		
BQM	11,520	11,520	25,000

Impacts to Data Sheet:Yes. POD (Product Outline Drawing).

		MCHP C04-00029c (mm)			Current: LPI PO-SOT-011 rev3 (mm)			Proposed: GTBF ED-3077 rev4 (mm)		
		Min	Nom	Max	Min	Nom	Max	Min	Nom	Max
Leads	N	3			3			3		
Pitch	e	1.50 BSC			1.45	1.50	1.55	1.50 BSC		
Outside Lead Pitch	e1	3.00 BSC			2.90	3.00	3.10	3.00 BSC		
Overall Height	A	1.40	1.50	1.60	1.40	1.50	1.60	1.41	1.50	1.59
Overall Width	H	3.94	4.10	4.25	3.94	-	4.25	3.97	4.15	4.24
Mold Package Width at Base	E	2.50 BSC			2.40	2.50	2.60	2.41	2.50	2.59

Mold Package Width at Top	E1	2.13	2.20	2.29	-	-	-	-	-	-
Overall Length	D	4.50 BSC			4.40	4.50	4.60	4.41	4.50	4.59
Tab Length (Option A)	D1A	1.63	1.73	1.83	-	-	-	-	-	-
Tab Length (Option B)	D1B	1.40	1.60	1.75	1.40	1.60	1.75	1.65 BSC		
Tab Length (Option C)	D1C	1.62	1.73	1.83	-	-	-	-	-	-
Foot Length	L	0.79	1.10	1.20	0.80	-	1.20	0.81	0.95	1.16
Lead Thickness	c	0.35	0.40	0.44	0.30	0.40	0.50	0.35	0.38	0.44
Lead 2 Width	b	0.41	0.50	0.56	0.41	0.47	0.53	0.43	0.48	0.54
Leads 1 & 3 Width	b1	0.36	0.42	0.48	0.36	0.42	0.48	0.43	0.48	0.54

Change Impact:None

Reason for Change:To improve productivity by qualifying GTBF as an additional assembly site.

Change Implementation Status:In Progress

Estimated Qualification Completion Date:November 2023

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:

	July 2023					>	November 2023				
Workweek	27	28	29	30	31		44	45	46	47	49

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: July 31, 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_BLAS-30BRVK558 Qual Plan.pdf](#)

[PCN_BLAS-30BRVK558 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.

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Affected Catalog Part Numbers (CPN)

CL1N8-G
FP0100N8-G
CL25N8-G
CL2N8-G
MD0100N8-G
LR8N8-G
LR645N8-G
LR745N8-G
LND150N8-G
HV9921N8-G
HV9922N8-G
HV9923N8-G

CCB 6431

Pre and Post Change Summary

PCN# BLAS-30BRVK558



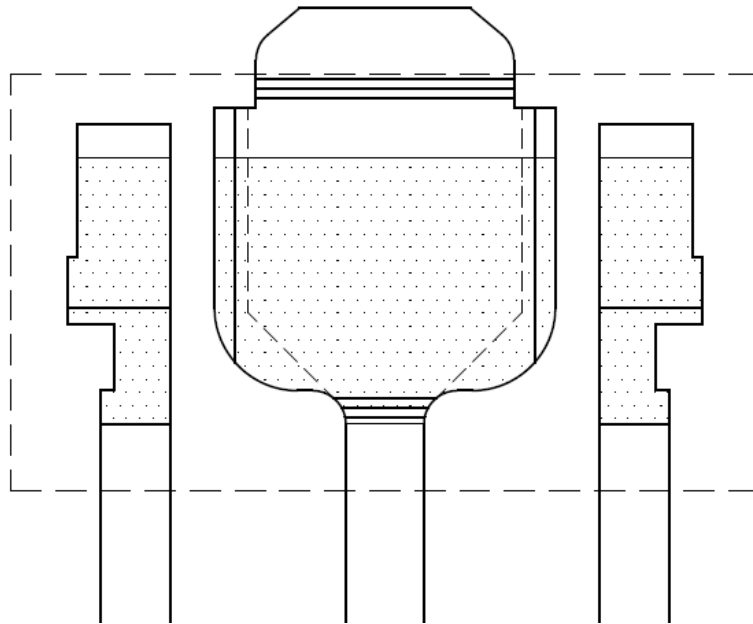
A Leading Provider of Smart, Connected and Secure Embedded Control Solutions



SMART | CONNECTED | SECURE

LEAD FRAME COMPARISON

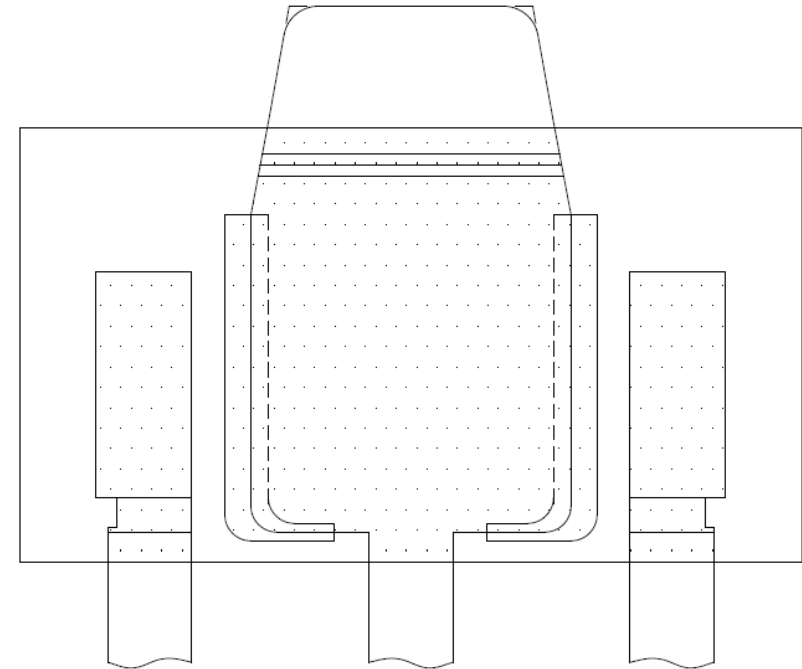
LPI



Note: Not to scale

Lead frame Material	KFC
Lead-Frame Paddle Size	79x63mils

GTBF



Note: Not to scale

Lead frame Material	KFC/LY89
Lead-Frame Paddle Size	71x79mils



QUALIFICATION PLAN SUMMARY

PCN#: BLAS-30BRVK558

Date:
July 6, 2023

**Qualification of GTBF as an additional assembly site for selected
CL1N8-G, CL25N8-G, CL2N8-G, FP0100N8-G, HV9921N8-G,
HV9922N8-G, HV9923N8-G, LND150N8-G, LR645N8-G, LR745N8-G,
LR8N8-G and MD0100N8-G catalog part numbers (CPN) available
in 3L SOT-89 package.**

Purpose: Qualification of GTBF as an additional assembly site for selected CL1N8-G, CL25N8-G, CL2N8-G, FP0100N8-G, HV9921N8-G, HV9922N8-G, HV9923N8-G, LND150N8-G, LR645N8-G, LR745N8-G, LR8N8-G and MD0100N8-G catalog part numbers (CPN) available in 3L SOT-89 package.

CCB #: 6431

<u>Misc.</u>	Assembly site	GTBF
	BD Number	BD-001596-01
	MP Code (MPC)	65043YA5XA00
	Part Number (CPN)	MD0100N8-G
	MSL information	MSL1, 260
	Assembly Shipping Media (T/R, Tube/Tray)	Bag
	Base Quantity Multiple (BQM)	25,000
	Reliability Site	MTAI
<u>Lead-Frame</u>	Paddle size	71x79mils
	Material	KFC/LY89
	DAP Surface Prep	Spot Ag Plating
	Treatment	Non-Rough
	Process	Stamp
	Lead-lock	No
	Part Number	200000020251
	Lead Plating	MatteSn
<u>Bond Wire</u>	Strip Size	199x26
	Strip Density	72
<u>Bond Wire</u>	Material	Au
<u>Backside Coat</u>	Part Number	None
	Conductive	No
<u>Die Attach</u>	Part Number	CRM-1800
	Conductive	Yes
<u>MC</u>	Part Number	CEL-9240HF10L8
<u>PKG</u>	Package Type	SOT-89
	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	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	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.
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	
Wire Bond Pull - WBP	Mil. Std. 883-2011	5	0	1	5	0	5	MTAI	MTAI	30 bonds from a min. 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	5	0	1	5	0	5	MTAI	MTAI	30 bonds from a min. 5 devices.
Bond Line Thickness (BLT) robustness assessment						>0.5 mils		GTBF	GTBF	
Wire Sweep								GTBF	GTBF	Required for any reduction in wire bond thickness.
Physical Dimmensions	Measure per JESD22 B100 and B108	10	0	3	30	0	5	MTAI	MTAI	
External Visual	Mil. Std. 883-2009/2010	All devices prior to submission for qualification testing	0	3	ALL	0	5	MTAI	MTAI	
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 Jedec-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	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	77	5	3	246	0	10	MTAI	MTAI	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	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 25°C; 3 gram force WBP, on 5 devices from 1 lot, test following Temp Cycle stress.	77	5	3	246	0	15	MTAI	MTAI	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.