



**Product Change Notification / MAAN-24NWLH863**

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**Date:**

28-Jul-2023

**Product Category:**

Depletion Mode MOSFETs, N-Channel Enhancement Mode MOSFETs, P-Channel Enhancement Mode MOSFETs

**PCN Type:**

Manufacturing Change

**Notification Subject:**

CCB 6432 Initial Notice: Qualification of GTBF as an additional assembly site for selected DNxxxxN8, TNxxxxN8, TPxxxxN8, VNxxxxN8 and VPxxxxN8 device families available in 3L SOT-89 package.

**Affected CPNs:**

[MAAN-24NWLH863\\_Affected\\_CPN\\_07282023.pdf](#)

[MAAN-24NWLH863\\_Affected\\_CPN\\_07282023.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 DNxxxxN8, TNxxxxN8, TPxxxxN8, VNxxxxN8 and VPxxxxN8 device families available in 3L SOT-89 package.

**Pre and Post Change Summary:**

	Pre Change	Post Change
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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 Paddle Size	79x63mils	79x63mils	71x79mils
	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 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	2 7	2 8	2 9	3 0	3 1		4 4	4 5	4 6	4 7	4 8
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 28, 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\\_MAAN-24NWLH863\\_Pre\\_and\\_Post\\_Change\\_Summary.pdf](#)

[PCN\\_MAAN-24NWLH863\\_Qual\\_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)

DN3545N8-G-D561  
TN2510N8-G-D592  
TN2540N8-L-G  
TP2540N8-L-G  
DN3525N8-G  
DN2540N8-G  
DN3545N8-G  
DN2530N8-G  
DN3535N8-G  
TN2510N8-G  
TN2524N8-G  
TN2540N8-G  
TN2501N8-G  
TN2504N8-G  
TP2510N8-G  
TP2520N8-G  
TP2522N8-G  
TP2540N8-G  
TP2502N8-G  
DN3145N8-G  
DN3135N8-G  
DN1509N8-G  
TN0104N8-G  
VN3205N8-G  
VN3205N8-G-D576  
VP3203N8-G  
DN2450N8-G  
TN2425N8-G  
TN2435N8-G  
TP2424N8-G  
TP2435N8-G  
VN2450N8-G  
VN2460N8-G  
VP2450N8-G  
TN5325N8-G  
TN5335N8-G  
TP5322N8-G



## **QUALIFICATION PLAN SUMMARY**

**PCN #: MAAN-24NWLH863**

**Date:**

**July 6, 2023**

**Qualification of GTBF as an additional assembly site for selected  
DNxxxxN8, TNxxxxN8, TPxxxxN8, VNxxxxN8 and VPxxxxN8  
device families available in 3L SOT-89 package.**

Purpose: Qualification of GTBF as an additional assembly site for selected  
 DNxxxxN8, TNxxxxN8, TPxxxxN8, VNxxxxN8 and VPxxxxN8 device  
 families available in 3L SOT-89 package.

CCB #: 6432

<u>Misc.</u>	Assembly Site	GTBF
	BD Number	BD-001595-01
	MP Code (MPC)	6F001QA5XL00
	Part Number (CPN)	VP2450N8-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
	Strip Size	199x26
	Strip Density	72
<u>Bond Wire</u>	Material	Au
<u>Backside Coat</u>	Part Number	Au
	Conductive	Yes
<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

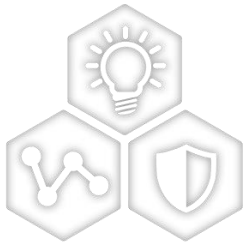
Test Name	Conditions	Sample Size	Min. Qty of Spares per Lot (should be properly marked)	Qty of Lots	Total Units	Fail Accept Qty	Est. Dur. Days	ATE Test Site	REL Test Site	Special Instructions
Standard Pb-free Solderability	J-STD-002D ; Perform 8 hour steam aging for Matte tin finish  Standard Pb-free: 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	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	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.
Wire Sweep						0		GTBF	GTBF	Required for any reduction in wire bond thickness.
Physical Dimmensions	Measure per JESD22 B100 and B108	10	0	3	30		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.

**CCB 6432**  
**Pre and Post Change Summary**  
**PCN #: MAAN-24NWLH863**



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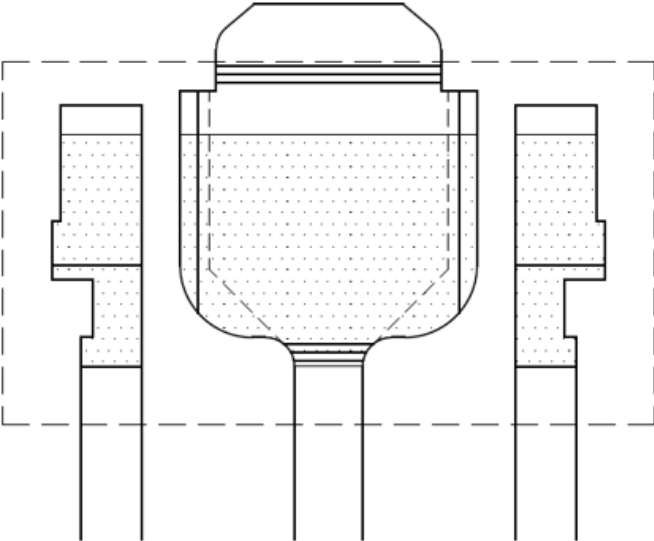
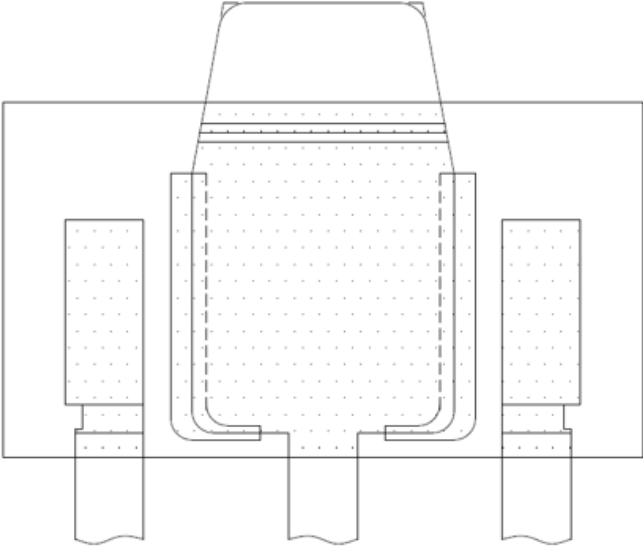
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# Lead Frame Comparison

LPI	GTBF				
 <table border="1" data-bbox="257 1110 1090 1186"><tr><td>Paddle Size</td><td>79x63mils</td></tr></table>	Paddle Size	79x63mils	 <table border="1" data-bbox="1457 1110 2295 1186"><tr><td>Paddle Size</td><td>71x79mils</td></tr></table>	Paddle Size	71x79mils
Paddle Size	79x63mils				
Paddle Size	71x79mils				