

PRODUCT / PROCESS CHANGE NOTIFICATION

Generic Copy

PCN#2308001

• DATE: 2nd August, 2023

PCN Subject: Wafer Manufacturing Site Change for ZENER products

• **PCN Change Category:**

- ☒ **Material**

 ☐ **Process**

 ☐ **Datasheet/Specification**
☐ **Reliability**
☒ **Others (Wafer Manufacturing Site change)**

• **Description of Change Purpose or Reason:**

This PCN is issued to notify customers that our foundry fab “Phenitec Semiconductor Corporation” will transfer wafer manufacturing site from “HQ Fab” to “1st Fab” which both sites are located in Okayama, Japan. Along with manufacturing site change, the wafer diameter changed from 5” to 6” and several additional change for selected products will be implemented in order to ensure continuous supply and manufacturing standardization. For more detail, please check below change information.

We recommend that you acknowledge receipt of this notification within 30 days of this PCN date. If you require samples for further evaluation, please feel free to contact your local sales representative and make a request. We are always pleased to serve you at any time.

● **Change Information:**

Table	Table 1		Table 2		Table 3	
Comparison	From (Current)	Change to (New)	From (Current)	Change to (New)	From (Current)	Change to (New)
Wafer Foundry	PHENITEC SEMICONDUCTOR CORP.		PHENITEC SEMICONDUCTOR CORP.		PHENITEC SEMICONDUCTOR CORP.	
Manufacturing Site	HQ Fab	1st Fab	HQ Fab	1st Fab	HQ Fab	1st Fab
Wafer Size(inch)	5"	6"	5"	6"	5"	6"
Passivation	-		-	SiN	-	SiN
Topside Metal	No change		AlSiCu	Ti/Al/AlSiCu	Ti/Al	Ti/Al/AlSiCu
Backside Metal			Ti/Ni/Sn		AuAs	Ti/Ni/Sn

Table	Table 4		
Comparison	From (Current)		Change to (New)
Wafer Foundry	PHENITEC SEMICONDUCTOR CORP.		
Manufacturing Site	HQ Fab		1st Fab
Wafer Size(inch)	5"		6"
Passivation	-		SiN
Topside Metal	Ti/Al	AlSiCu	Ti/Al/AlSiCu
Backside Metal	AuAs	Ti/Ni/Sn	Ti/Ni/Sn

● **Verification /Qualification Data:**

The electrical characterization and high reliability testing have been completed on representative part numbers to ensure there is no change to device functionality or electrical specifications in the datasheet. There will be no change to the Form, Fit, or Function of products affected.

● **Affected Product Type : Refer to below Table 1~4.**

● **Effective Date : 2nd November, 2023**

➤ **The reliability test results are summarized below:**

Product reliability test result: PASS

No.	DESCRIPTION	TEST CONDITION	DURATION	FAILURE RATE	
1	Temperature Cycling (TCT)	Ta = -55°C ~ +150°C (2 cycles / Hour)	1000 CYCLES	0/77 PCS	3 LOTS PASS
2	High Temperature Storage Test (HTSL)	Ta = 150°C	1000 HOURS	0/77 PCS	3 LOTS PASS
3	Resistance to Solder Heat (RSH)	Temperature of solder pot = 260 +5/-0°C Time for dipping in solder = 10 ± 1 Sec	1 CYCLE	0/30 PCS	3 LOTS PASS
4	Intermittent Forward Operation Life (IOL)	$\Delta T_j \geq 100^\circ\text{C}$, POWER ON: 2 mins; POWER OFF: 2 mins.	15000 CYCLES	0/77 PCS	3 LOTS PASS
5	High Temperature Reverse Bias (HTRB)	Ta = 140°C , VR = 80%VB, DC supply	1000 HOURS	0/77 PCS	3 LOTS PASS
6	Autoclave (AC)	Ta = 121°C, P = 29.7psia ,100%RH	96 HOURS	0/77 PCS	3 LOTS PASS
7	High Humidity High Temp. Reverse Bias(H3TRB)	TA = 85°C +/-2°C RH = 85% +/-5% VR = 80%VB DC Supply	1000 HOURS	0/77 PCS	3 LOTS PASS

- **ELECTRICAL CHARACTERISTICS SUMMARY:**

There is no change to the product electrical specifications.

- **SAMPLES NEED :**

Contact your local PANJIT sales representative.

- **TECHNICAL CONTACT :**

E-mail: jwchen@panjit.com.tw

- **FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:**

Contact your local PANJIT sales representative.

- **ADDITIONAL RELIABILITY :**

Contact your local PANJIT sales representative.

- **CHANGED PART IDENTIFICATION :**

The tracking of 1st delivery after change can be identified by production lot number. Please contact your local sales for tracking lot number.

Please refer to below Lot number rule:

Lot number: **3924XXXXX**.

1st digit "3" denotes Year 2023.

2nd digit "9" denotes September.

3rd and 4th digits denote Day.

From 5th digits (XXXXX) denotes production serial number.

● **Table 1 : Affected Product Type**

Function: ZENER Diodes					
PZ1AFC2V5B	PZ1AL2V5B	PZ1AL2V5B-I	PZ1SMAF2V5B		

● **Table 2 : Affected Product Type**

Function: ZENER Diodes					
PZS524V3BCH	PZS524V7BCH	PZS525V1BCH			

● **Table 3 : Affected Product Type**

Function: ZENER Diodes					
BZX584B5V1	MMSZ5231B	PZD22B2V4C	PZD22B2V7C	PZD22B3V0C	PZD22B3V3C
PZD22B3V6C	PZD22B3V9C	PZD22B4V3C	PZD22B4V7C	PZD22B5V1C	

● **Table 4 : Affected Product Type**

Function: ZENER Diodes					
AZ23C2V4	AZ23C2V7	AZ23C3V0	AZ23C3V3	AZ23C3V6	AZ23C3V9
AZ23C4V3	AZ23C4V7	AZ23C5V1	BZT52-B2V4	BZT52-B2V4S	BZT52-B2V7
BZT52-B2V7S	BZT52-B3	BZT52-B3S	BZT52-B3V3	BZT52-B3V3S	BZT52-B3V6
BZT52-B3V6S	BZT52-B3V9	BZT52-B3V9S	BZT52-B4V3	BZT52-B4V3S	BZT52-B4V7
BZT52-B4V7S	BZT52-B5V1	BZT52-B5V1S	BZT52-C2V4	BZT52-C2V4S	BZT52-C2V7
BZT52-C2V7S	BZT52-C3	BZT52-C3S	BZT52-C3V3	BZT52-C3V3S	BZT52-C3V6
BZT52-C3V6S	BZT52-C3V9	BZT52-C3V9S	BZT52-C4V3	BZT52-C4V3S	BZT52-C4V7
BZT52-C4V7S	BZT52-C5V1	BZT52-C5V1S	BZX584C2V4	BZX584C2V7	BZX584C3
BZX584C3V3	BZX584C3V6	BZX584C3V9	BZX584C4V3	BZX584C4V7	BZX584C5V1
BZX84B2V4	BZX84B2V4W	BZX84B2V7	BZX84B2V7W	BZX84B3	BZX84B3V3
BZX84B3V3W	BZX84B3V6	BZX84B3V6W	BZX84B3V9	BZX84B3V9W	BZX84B3W
BZX84B4V3	BZX84B4V3W	BZX84B4V7	BZX84B4V7W	BZX84B5V1	BZX84B5V1W
BZX84C2V4	BZX84C2V4TW	BZX84C2V4W	BZX84C2V7	BZX84C2V7TW	BZX84C2V7W
BZX84C3	BZX84C3TW	BZX84C3V3	BZX84C3V3TW	BZX84C3V3W	BZX84C3V6
BZX84C3V6TW	BZX84C3V6W	BZX84C3V9	BZX84C3V9TW	BZX84C3V9W	BZX84C3W
BZX84C4V3	BZX84C4V3TW	BZX84C4V3W	BZX84C4V7	BZX84C4V7TW	BZX84C4V7W
BZX84C5V1	BZX84C5V1TW	BZX84C5V1W	DZ23C4V7	DZ23C5V1	MMBZ5221B
MMBZ5221BTW	MMBZ5221BV	MMBZ5221BW	MMBZ5222B	MMBZ5222BTW	MMBZ5222BV
MMBZ5222BW	MMBZ5223B	MMBZ5223BTW	MMBZ5223BV	MMBZ5223BW	MMBZ5224B
MMBZ5224BTW	MMBZ5224BV	MMBZ5224BW	MMBZ5225B	MMBZ5225BTW	MMBZ5225BV
MMBZ5225BW	MMBZ5226B	MMBZ5226BTW	MMBZ5226BV	MMBZ5226BW	MMBZ5227B
MMBZ5227BTW	MMBZ5227BV	MMBZ5227BW	MMBZ5228B	MMBZ5228BTW	MMBZ5228BV

● **Table 4 : Affected Product Type**

Function: ZENER Diodes					
MMBZ5228BW	MMBZ5229A	MMBZ5229AW	MMBZ5229B	MMBZ5229BTW	MMBZ5229BV
MMBZ5229BW	MMBZ5230A	MMBZ5230AW	MMBZ5230B	MMBZ5230BTW	MMBZ5230BV
MMBZ5230BW	MMBZ5231A	MMBZ5231AW	MMBZ5231B	MMBZ5231BTW	MMBZ5231BV
MMBZ5231BW	MMSZ5221B	MMSZ5221BS	MMSZ5222B	MMSZ5222BS	MMSZ5223B
MMSZ5223BS	MMSZ5224B	MMSZ5224BS	MMSZ5225B	MMSZ5225BS	MMSZ5226B
MMSZ5226BS	MMSZ5227B	MMSZ5227BS	MMSZ5228B	MMSZ5228BS	MMSZ5229A
MMSZ5229AS	MMSZ5229B	MMSZ5229BS	MMSZ5230A	MMSZ5230AS	MMSZ5230B
MMSZ5230BS	MMSZ5231A	MMSZ5231AS	MMSZ5231BS		



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Customer Acknowledgement Form

(To be filled out by the customer and returned to HQBU of PANJIT)

The indicated Customer Notification letter was received and acknowledged by the undersigned authority.

Company Name : _____

Customer Name : _____(Signature) Date : _____

PCN Number : PCN# 2308001

Approval for the Product/Process change: ☐Yes ☐No

Comments/Additional requests:

Thanks for your attention on this matter. Please return the acknowledgment form to your local PANJIT sales representative.

Please note that no objection within 30 days upon receiving will be deemed as being accepted and agreed with this Process Change Notification.