

## PRODUCT / PROCESS CHANGE NOTIFICATION

### Generic Copy

**PCN#2303002**

• DATE: 28<sup>th</sup> March, 2023

**PCN Subject: Additional Assembly Site for Package SOT-363**

• **PCN Change Category:**




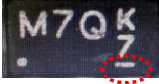
- Material**                       **Process**                       **Datasheet/Specification**  
 **Reliability**  
 **Others (      Additional assembly site      )**

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





This PCN is being issued to announce the qualification of PANJIT Semiconductor (Xuzhou) Co., Ltd (located in Jiangsu Province, China) as an alternate assembly and test site for SOT-363 selected products. The products that will be manufactured from this new assembly/test site are form, fit, and function compatible with the current qualified manufacturing sites. The qualification incorporates new bill of material (BOM) sets including the utilization of High-Density Leadframe, the change of wire type and wire diameter. 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:**

Comparison			Table 1		
Assembly Site			Current	Add	
Location			PANJIT International Inc.	PANJIT Semiconductor (Xuzhou) Co., Ltd.	
Location			Kaohsiung, Taiwan	Xuzhou, China	
Material	Wafer	Supplier	Phenitex Semiconductor Corp.	Yangzhou Genesis Microelectronics Co., Ltd	
		Diameter (inch)	5"		
		Die Size(um)	MMDT2907AQ: 400 X 400 MMDT3906: 280 X 280	MMDT2907AQ: 460 X 460 MMDT3906: 260 X 260	
		Thickness (um)	230 ± 20	165 ± 15	
	Lead Frame	Material	Alloy 42		
	Wire	Material / Diameter (mil)	Ag / 1.0 Au / 1.0	Cu / 0.8	
	Epoxy Molding Compound	Product Name	ELER-8-500C-84	GR640HV-L1 B18	
	Carrier Tape	Material	Polycarbonate (PC)	Polystyrene (PS)	
	Ending Tape	Material	Polyester	Paper	
		Color	Black	Yellow	
	Blue Anti-Static Plastic Reel				
	Method	Process	De-Flash	Electrolytic De-flash	Chemical De-flash
Form	Marking Format			 Add bar "-" for new assembly site	

● **Change Information:**

Comparison			Table 2	
Assembly Site			Current	Add
Location			Kaohsiung, Taiwan	PANJIT Semiconductor (Xuzhou) Co., Ltd. Xuzhou, China
Material	Wafer	Supplier	Mosel Vitelic Inc.	
		Diameter (inch)	6"	
		Die Size(um)	360 x 360	
		Thickness (um)	152	
	Lead Frame	Material	Alloy 42	
	Wire	Material / Diameter (mil)	Cu / 1.0	Cu / 0.8
	Epoxy Molding Compound	Product Name	ELER-8-500C-84	GR640HV-L1 B18
	Carrier Tape	Material	Polycarbonate (PC)	Polystyrene (PS)
	Ending Tape	Material	Polyester	Paper
		Color	Black	Yellow
Blue Anti-Static Plastic Reel				
Method	Process	De-Flash	Electrolytic De-flash	Chemical De-flash
Form	Marking Format			 Add bar "-" for new assembly site

● **Change Information:**

Carrier Tape	Current	Add
Assembly Site	PANJIT International Inc.	PANJIT Semiconductor (Xuzhou) Co., Ltd.
Dimension		
Symbol (mm)	Dimension	Dimension
<b>Ao</b>	2.16 ± 0.10 2.28 ± 0.10	2.30 ± 0.10
<b>Ko</b>	1.07 ± 0.10 1.10 ± 0.10	1.22 ± 0.10
<b>Cd</b>	0.15 MAX.	0.20 MAX.

- **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 unless specifically indicated.

- **Affected Product Type:**

**Table 1:**

Function: Bipolar Junction Transistors	
MMDT2907AQ	MMDT3906

**Table 2:**

Function: MOSFET	
PJT138K	

- **Effective Date : 28<sup>th</sup> June, 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°C Time for dipping in solder = 10 +2/-0 Sec	1 CYCLE	0/30 PCS	3 LOTS PASS
4	Solder ability (SD)	Temperature of solder pot = 245 ±5°C Time for dipping in solder = 5 ±0.5 Sec	1 CYCLE	0/10 PCS	3 LOTS PASS
5	Intermittent Forward Operation Life (IFOL)	ΔTj ≥ 100°C Power On: 120 sec Power Off: 120 sec	15000 CYCLES	0/77 PCS	3 LOTS PASS
6	High Temperature Reverse Bias (HTRB)	Ta = 140°C , VR = 80%VB, DC supply	1000 HOURS	0/77 PCS	3 LOTS PASS
7	High Temperature Gate Bias (HTGB)	Tj ≤ Tj max, 100%VGS	1000 HOURS	0/77 PCS	3 LOTS PASS
8	Autoclave (AC)	Ta = 121°C, P = 29.7psia , 100%RH	96 HOURS	0/77 PCS	3 LOTS PASS
9	Temperature Humidity Storage (THS)	Ta = 85°C , RH = 85%	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: alanliu@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 1<sup>st</sup> 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: **2924XXXXX**.

1st digit "2" denotes Year 2022.

2nd digit "9" denotes September.

3rd and 4th digits denote Day.

From 5<sup>th</sup> digits (XXXXX) denotes production serial number.



## Customer Acknowledgement Form

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(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#2303002

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.