

PRODUCT / PROCESS CHANGE NOTIFICATION

Generic Copy

PCN#2302001

• DATE: 10th February, 2023

PCN Subject: Change Assembly Site for Package DFN Series

• **PCN Change Category:**

- ☒ **Material**

 ☒ **Process**

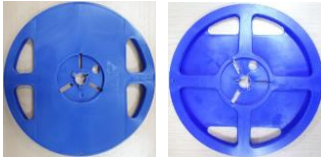
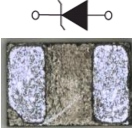
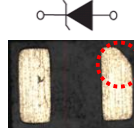
 ☐ **Datasheet/Specification**
☐ **Reliability**
☒ **Others (New assembly site)**

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

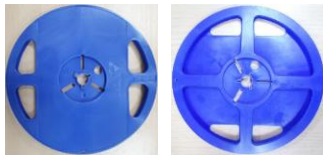
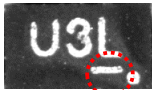
This PCN is being issued to announce the qualification of PANJIT Semiconductor (Xuzhou) Co., Ltd (located in Jiangsu Province, China) as an assembly and test site for DFN series selected products. The products that will be manufactured from this new assembly/test site are form, fit, and function compatible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

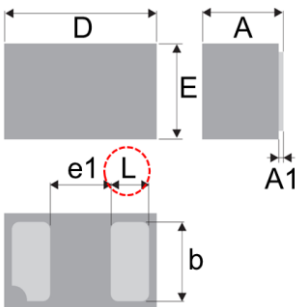
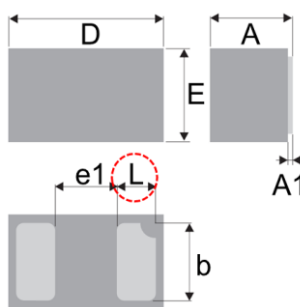
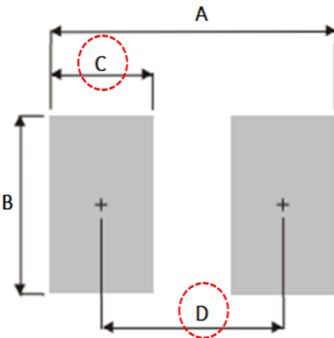
● **Change Information:**

Comparison			Table 1	
Assembly Site			From (Current)	Change to (New)
			PANJIT International Inc.	PANJIT Semiconductor (Xuzhou) Co., Ltd.
Production Site Location			Kaohsiung, Taiwan	Xuzhou, China
Package			DFN 2L	DFN1006-2L
Packing			8 kpcs / reel	10 kpcs / reel
Material	Lead Frame	Material	Copper	Copper (NiPdAu plated)
	Die Attach (Epoxy)	Material	Ablestik 84-1LMISR4	5002BG-6
	Wire	Material / Diameter (mil)	Ag / 1.0 Au / 1.0 Au / 0.8	PdAuCu / 0.8
	Epoxy Molding Compound	Type Name	ELER-8-100HFS CEL-9240HF	EME-G770HCD
	Carrier Tape	Material	Polycarbonate (PC)	Polycarbonate (PC)
	Ending tape	Material	Polyester	Paper
		Color	Black	Yellow
Blue Anti-Static Plastic Reel				
Method	Process	De-Flash	None	Chemical De-flash
		Lead Plating	Sn	None
Form	Marking format			 Add bar "-" for new assembly site
	Bottom View		 Lead color: Silver	 Lead color: Gold
	Side View			

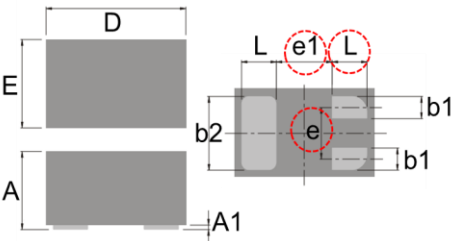
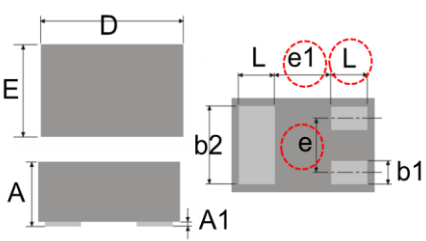
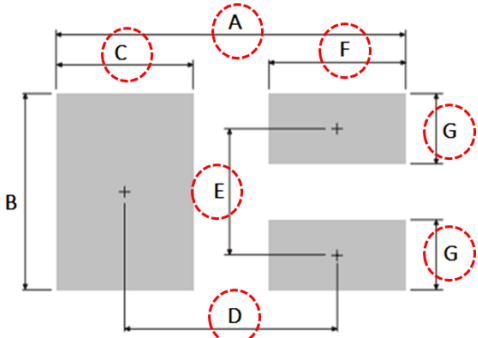
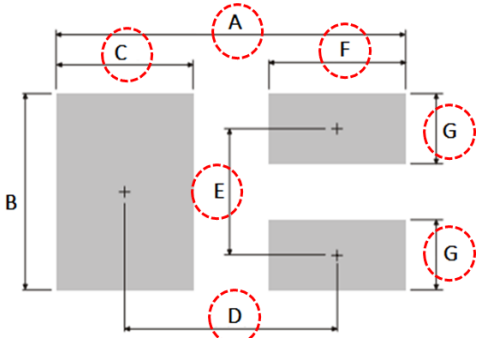
• **Change Information:**

Comparison			Table 2	
Assembly Site			From (Current)	Change to (New)
			PANJIT International Inc.	PANJIT Semiconductor (Xuzhou) Co., Ltd.
Production Site Location			Kaohsiung, Taiwan	Xuzhou, China
Package			DFN 3L	DFN1006-3L
Packing			8 kpcs / reel	10 kpcs / reel
Material	Lead Frame	Material	Copper	Copper (NiPdAu plated)
	Die Attach (Epoxy)	Material	Ablestik 84-1LMISR4	5002BG-6
	Wire	Material / Diameter (mil)	Au / 1.0	PdAuCu / 0.8
	Epoxy Molding Compound	Type Name	ELER-8-100HFS CEL-9240HF	EME-G770HCD
	Carrier Tape	Material	Polycarbonate (PC)	Polycarbonate (PC)
	Ending tape	Material	Polyester	Paper
		Color	Black	Yellow
	Blue Anti-Static Plastic Reel			
Method	Process	De-Flash	None	Chemical De-flash
		Lead Plating	Sn	None
Form	Marking format			 Add bar "-" for new assembly site
	Bottom View		 Lead color: Silver	 Lead color: Gold
	Side View			

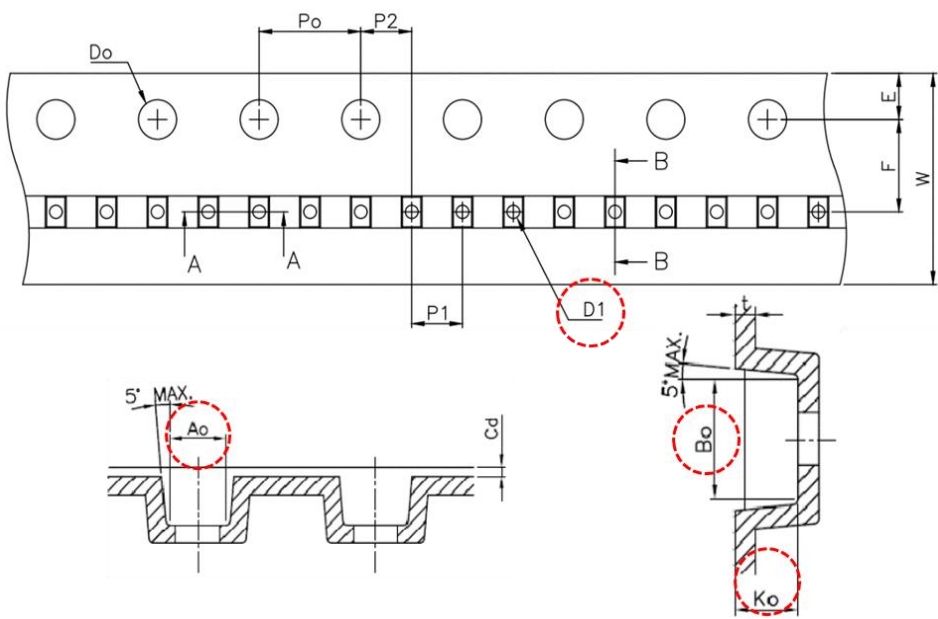
• **Change Information:**

Comparison Package	From (Current) DFN 2L		Change to (New) DFN1006-2L	
Package Outline Drawing Dimension				
Symbol (mm)	Min	Max	Min	Max
L	0.22	0.32	0.20	0.30
Pad Layout				
Symbol (mm)	Dimension		Dimension	
C	0.42		0.40	
D	0.68		0.70	

• **Change Information:**

Comparison Package	From (Current) DFN 3L		Change to (New) DFN1006-3L	
Package Outline Drawing Dimension				
Symbol (mm)	Min	Max	Min	Max
L	0.22	0.32	0.20	0.30
e	0.36 ref		0.35 ref	
e1	0.36 ref		0.40 ref	
Pad Layout				
Symbol (mm)	Dimension		Dimension	
A	1.10		1.15	
C	0.42		0.45	
D	0.68		0.70	
E	0.38		0.45	
F	0.42		0.45	
G	0.22		0.25	

• **Change Information:**

Carrier Tape	From (Current)		Change to (New)	
Assembly Site	PANJIT International Inc.		PANJIT Semiconductor (Xuzhou) Co., Ltd.	
Package	DFN 2L	DFN 3L	DFN1006-2L	DFN1006-3L
Dimension				
Symbol (mm)	Dimension		Dimension	
Ao	0.72 ± 0.05		0.69 ± 0.05	
Bo	1.12 ± 0.05		1.19 ± 0.05	
Ko	0.62 ± 0.05		0.63 ± 0.05	
D1	0.50 ± 0.05		0.40 ± 0.10	

- **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.

- **Affected Product Type:**

Table 1: Change DFN 2L assembly site from PANJIT International Inc. to PANJIT Semiconductor (Xuzhou) Co., Ltd.

Wire Material	Wire Diameter (mil)	Function: SCHOTTKY			
Ag	1.0	SBA0530Q	SBA0540Q	SBA0520Q	
Au	0.8	1SS417FN2	AZRB521S30FN2	BAT54FN2	RB521S30FN2
Wire Material	Wire Diameter (mil)	Function: ESD Protection			
Ag	1.0	PJEC5V0M1FN2	PJE24VM5FN2	PJE7V0M3FN2	
Au	1.0	PJSD03LCFN2	PJSD05CFN2	PJSD05LCFN2	PJSD12LCFN2
Au	0.8	PE1403M1Q	PE1605M1Q	PEC1605M1Q	PJEC5V0V3FN2
		PJE28VM2FN2	PJE36VM2FN2	PJSD05U06LCFN2	

Table 2: Change DFN 3L assembly site from PANJIT International Inc. to PANJIT Semiconductor (Xuzhou) Co., Ltd.

Wire Material	Wire Diameter (mil)	Function: ESD Protection			
Au	1.0	PE1605M2Q			

- **Effective Date : 10th May, 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)	ΔT _J ≥ 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	Autoclave (AC)	Ta = 121°C, P = 29.7psia ,100%RH	96 HOURS	0/77 PCS	3 LOTS PASS
8	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 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: **2924XXXXX**.

1st digit "2" denotes Year 2022.

2nd digit "9" denotes September.

3rd and 4th digits denote Day.

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



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TEL:886-7-621-3121 FAX:886-7-621-3129 Website: www.panjit.com.tw

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#2302001

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.