



Wafer Probe and DPS Factory Change

pSemi to Unisem Transfer

pSemi 10/09/2023



Wafer Test and DPS Process from pSemi US to Unisem Malaysia

Dear Valued Customer,

pSemi would like to inform our customers of a minor manufacturing flow change. pSemi will be transferring wafer probe and DPS (Die Processing Service) processes from the pSemi US factory to Unisem Malaysia factory.

The change has been fully qualified. There is no change to form, fit or function of the product. All quality standards and reliability performance have been verified.

Please see the following slides for more details. If you have any follow up questions please reach out to your regional pSemi Sales Representative (accountrep@psemi.com).

Thank you for your continued business.



Wafer Test and DPS Process from pSemi US to Unisem Malaysia

Description of Change

- Transfer production Wafer Test and DPS Process from pSemi US to Unisem Malaysia
- Wafer Test Plan and hardware will transfer from pSemi to Unisem
- Unisem DPS process is matched to pSemi and is fully qualified
- Only location changes (US to Malaysia)
- Test plan, hardware, DPS process will remain the same
- There is no change to Final Assembly and Outgoing Test. All Final Quality and Test remains unchanged.
- There is no change to the part number
- Traceability is managed by lot number
- Affected part list provided in separate file

Motivation for Change

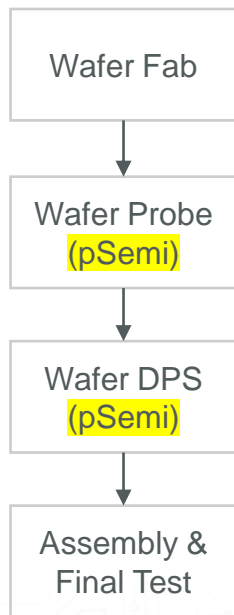
- Consolidate manufacturing in Asia region factory

Change Schedule

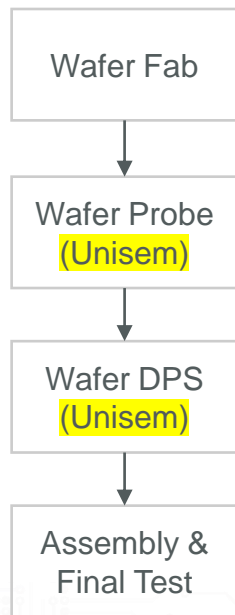
- Shipments start Jan 2024

Manufacturing Flow

Old Flow



New Flow



No Change

Factory Location Change

Factory Location Change

No Change

No Change in
Final Quality Gate

Reliability Test Verification

- The new process flow was verified for new products by below Reliability Test Plan
- Result = PASS
- New Manufacturing flow is considered fully qualified and ready for mass production

Item	Test	Stress Conditions	Sample Size
1	HTOL	Tj = 150 °C @ VDD*, VCTL = 3.3V, 500 hrs	77 pcs x 3 lots
2	Biased HAST	130°C, 85% RH, 33.3 psia (2.266 atm) @ VDD* = 5.5V, VCTL = 3.3V, 96 hrs	77 pcs x 3 lots
3	Unbiased HAST	130°C, 85% RH, 33.3 psia (2.266 atm), 96 hrs	77 pcs x 3 lots
4	Temp Cycling (TC)	Cond 2 (C): -65 °C to +150 °C @ 500 cycles	77 pcs x 3 lots
5	High Temp Storage (HTS)	150°C, 1,000 hrs	45 pcs x 1 lots
6	MSL Level 1	85°C, 85% RH, 260°C Peak Reflow, 168 hrs	77 pcs x 3 lots

* Vdd PE423422 = 5.5V; PE42359 = 3.3V per datasheet maximum



THANK YOU

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