pSemi Corporation
9369 Carroll Park Drive, San Diego, CA. 92121

Product/Process Change (PCN) Notification

PCN Number: CO-23764 Date Issued: Jun 18th, 2019 PCN Effective Date: September 18th, 2019 Product(s) Affected: PE4151 Sample Availability: Jun 18th, 2019 Change Control Board Approval #: CO-23764	Contact: Elizabeth La Greca Title: Director, Sales Operations Phone: 1-858-795-0106 Email: pcn@psemi.com

Change Category:

☒ Wafer Fabrication Process	☐ Shipping/Labeling
☐ Design/Mask Change	☐ Equipment
☐ Singulation Process	☐ Material
☐ Assembly Process	☐ Product Specification
☐ Electrical Test	☐ Product End of Life
☐ Manufacturing Site	☒ Other - Ordering codes change

Purpose of Change:

To enable usage of Lapis in Japan as the wafer fabrication site for the PE4151.

Description of Change:

This is a notification to advise our customers that pSemi is transferring PE4151.

pSemi has been working to transfer products from Silanna fab in Australia to Lapis fab in Japan to ensure continuous supply. Silanna and Lapis are qualified pSemi fabs.

Starting September 18th, the PE4151 shipped to customers will be supplied from either Silanna or Lapis wafers. Lapis will be the primary wafer fabrication site for the PE4151.

PE4151 material has been qualified with no change to form, fit, function or reliability.

Ordering code changes:

Original ordering codes (Silanna): PE4151MLAA-Z; EK4151-01
New ordering codes (Lapis): PE4151B-Z; EK4151-02

pSemi manages inventory on a First-In First-Out (FIFO) basis. For the exact timing of the order code change, please contact your account rep. or accountrep@psemi.com.

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Customer Acknowledgement of Receipt:

☐ Change Denied *(Include explanation in comments section below)* ☐ Change Approved	**Name:**	
	Title:	
	Company:	
	Date:	
	Signature:	
Customer Comments:		

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Appendix A – Reliability Qualification Summary

PE4151

Reliability Summary Report

Part Number(s):	PE4151	**Product Family:**	Mixer
Package Type:	10L MSOP	**MSL Rating:**	MSL1
Technology Platform:	UltraCMOS® 2		
Reliability Summary:	Based on the results of reliability testing, the PE4151 has met the reliability requirements for Production.		

Table 1: Product Design Reliability Results

Test #	Test Performed	TEST METHOD/ Conditions	Duration	Sample Size	Result
1	High Temperature Operating Life (HTOL)	JESD22-A108; VDD= 3.1 V; $T_A = T_J$= 150 °C;	500 Hrs.	1 lot x 77	Pass
2	ESD Human Body Model (HBM)	MIL-STD-883 Model 3015.7 (All pins)	1.0 kV	1 lot x 3	Pass

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PE4151

Reliability Summary Report

Table 2: Package Reliability Results

Test	Test Performed	TEST METHOD/ Conditions	Duration	Sample Size	Result
3	High Temperature Storage Life (HTSL)	JESD22-A103; T_a= 150°C	1,000 hrs.	119	Pass
4	Highly Accelerated Stress Test (HAST)	JESD22-A110; T_a= 130°C, RH= 85%; VDD= 3.3 V	168 hrs.	45	Pass
5	Autoclave (AC)	JESD22-A102; T_a= 121°C; RH= 100%; 2.023 atm	96 hrs.	45	Pass
6	Temperature Cycling (TC)	JESD22-A104; T_a= -65°C to +150°C	500 cycs.	45	Pass

Table 3: Package Assembly Level Reliability Results

Test #	Test Performed	TEST METHOD/ Conditions	Duration	Sample Size	Result
7	Wire Bond Pull	AEC-Q100-001 / Subcon specs.	-	40	Pass
8	Physical Dimensions	JESD22-B100 / Subcon specs.	-	40	Pass
9	Die Shear	Mil-Std-883 M2019.8 / Subcon specs.	-	16	Pass
10	Solderability	JESD22-B102 / Subcon specs.	-	40	Pass

Technology Reliability Report (DOC-87869)