

## Product/Process Change (PCN) Notification

PCN Number: CO-22064 Date Issued: November 13th, 2018 PCN Effective Date: February 13th, 2019 Product(s) Affected: PE42553 Sample Availability: November 13th, 2018 Change Control Board Approval #: CO-22064	Contact: Elizabeth La Greca Title: Director, Sales Operations Phone: 1-858-795-0106 Email: pcn@psemi.com
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### Change Category:

<input checked="" type="checkbox"/> Wafer Fabrication Process <input type="checkbox"/> Design/Mask Change <input type="checkbox"/> Singulation Process <input type="checkbox"/> Assembly Process <input type="checkbox"/> Electrical Test <input type="checkbox"/> Manufacturing Site	<input type="checkbox"/> Shipping/Labeling <input type="checkbox"/> Equipment <input type="checkbox"/> Material <input type="checkbox"/> Product Specification <input type="checkbox"/> Product End of Life <input checked="" type="checkbox"/> Other - Ordering codes change
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### Purpose of Change:

To enable Lapis as the primary wafer fabrication site for the PE42553.

### Description of Change:

MagnaChip closed their 150 mm wafer CMOS fab in South Korea at the end of 2015. To ensure there is no disruption to supply, we have been working to transfer products from MagnaChip fab to Lapis fab in Japan. Magnachip and Lapis are qualified pSemi fabs.

Lapis PE42553 material has been qualified with no change to form, fit, function or reliability

Beginning February 13th, 2019, the PE42553 shipped to customers will be supplied from either MagnaChip or Lapis wafers. Lapis will become the primary wafer fabrication site for the PE42553.

Ordering code changes:  
 Original ordering codes (MagnaChip): PE42553A-Z; EK42553-01  
 New ordering codes (Lapis): PE42553B-Z; EK42553-02

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](mailto:accountrep@psemi.com).

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### Customer Acknowledgement of Receipt:

<input type="checkbox"/> Change Denied <i>(Include explanation in comments section below)</i>  <input type="checkbox"/> Change Approved	<b>Name:</b>	
	<b>Title:</b>	
	<b>Company:</b>	
	<b>Date:</b>	
	<b>Signature:</b>	
<b>Customer Comments:</b>		

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### Appendix A – Reliability Qualification Summary



**PE42553**

### Reliability Summary Report

Part Number(s):	PE42553	Product Family:	RF Switch
Package Type:	16L 3x3 QFN	MSL Rating:	MSL 3
Technology Platform:	ULTRACMOS®5		
Reliability Summary:	Based on the results of reliability testing, the PE42553 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)	Mil-Std-883 M1005.9/ JESD22-A108 VDD= 5.5V; VCTL= 3.6V; TA = TJ= 150°C;	500 hrs.	1 lot x 77	Pass
2	ESD Human Body Model (HBM)	Mil-Std-883 M3015 (All pins)	2.5kV	1 lot x 3	Pass
		Mil-Std-883 M3015 (RF Pins Only)	4kV	1 lot x 3	Pass
3	ESD Machine Model (MM)	JEDEC JESD22-A115	200V	1 lot x 3	Pass
4	ESD Charged Device Model (CDM)	JEDEC JESD22-C101	1000V	1 lot x 3	Pass

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**PE42553**

### Reliability Summary Report

Table 2: Package Reliability Results

Test #	Test Performed	TEST METHOD/ Conditions	Duration	Sample Size	Result
5	HTOL	Mil-Std-883 M1005.9/ JESD22-A108	500 hrs.	1 lot x 77	Pass
6	HTS	Mil-Std-883 M1008.2/ JESD22-A103 T <sub>A</sub> = 150°C	1,000 hrs.	1 lot x 77	Pass
7	HAST	JESD22-A110 VDD= 3.3 V; VCTL= 3.3V; P <sub>V</sub> = 2.270 atm;	96 hrs.	3 lots x 45	Pass
8	TC	Mil-Std-883 M1010.8/ JESD22-A104	500 cys.	3 lots x 45	Pass
9	TS	JESD22-A105 T <sub>A</sub> = -55°C to +125°C	100 cys.	3 lots x 45	Pass
10	WBP	Mil-Std-883 M2011.8/ JESD22-B115	-	3 lots x 20	Pass
11	Physical Dimensions	Mil-Std-883 M2016/ JESD22-B100	-	3 lots x 10	Pass
12	Die Shear	Mil-Std-883 M2019.8	-	3 lots x 5	Pass
13	Solderability	Mil-Std-883 M2003.9/ JESD22-B102	-	3 lots x 10	Pass

Technology Reliability Report (DOC-81028)