Peregrine Semiconductor Corp.
9380 Carroll Park Drive, San Diego, CA. 92121

Product/Process Change (PCN) Notification

PCN Number: CO-06965 Date Issued: 15 September 2014 PCN Effective Date: 15 December 2014 Product(s) Affected: PE42641 Sample Availability: Now Change Control Board Approval #: CO-06965	Contact: Elizabeth La Greca Title: Director, Sales Operations Phone: 858-795-0106 Email: elagreca@psemi.com

Change Category:

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

Purpose of Change:

Change of assembly and test manufacturing location for PE42641.

Description of Change:

Summary of changes: Discontinuing Unisem and Hana as assembly and test suppliers and adding Amkor Technology Philippines as a qualified assembly and final test location for PE42641.

Reliability, form, fit or function of the device is not affected by this change.

Ordering code changes:

- New ordering code: PE42641MLBD-Z / EK42641-04
- Original ordering codes: PE42641MLIBB-Z / EK42641-02, PE42641MLBC-Z / EK42641-03

Beginning 15 December 2014 PE42641 will no longer be manufactured at Unisem Malaysia or Hana Thailand. All parts shipped to the customer after this date will be assembled and tested by Amkor Technology Philippines.

Package BOM Comparison

	Existing Packaging BOM	New (Amkor) Packaging BOM
Leadframe	Pad ring Ag on Cu; Matte Sn plating	PPF: NiPdAu on Cu
Die Attach	CRM1076DJ	AMK06 (Amkor proprietary die attach)
Bondwires	1.0mil Gold Wire	1.0mil Gold Wire
Mold Compound	Sumitomo G770HCD	Sumitomo G700Y

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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:		

***Customer Acknowledgement is based upon JEDEC Standard, JESD46D. Form # DOC-00558 Rev2**
If there is a difference between JEDEC and specific customer requirements, customer requirements take precedence.

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Appendix A – Reliability Qualification Summary

Part Number(s):	PE42641	**Product Family:**	SWITCH
Package Type:	16L 3x3 QFN	**MSL Rating:**	1
Reference QBS Doc(s):	N/A	**Technology Platform:**	UltraCMOS® 2
Reliability Summary:	Based on the results of reliability testing, the PE42641 has met the reliability requirements for qualification.		

Table 1: Product Design Reliability Results

Test Performed	TEST METHOD/ Conditions	Duration	Req'd Sample Size[2] (#LOT x SS)	Actual Sample Size[3] (#LOT x SS)	Result (REJ/SS)	Report #
HTOL	Mil-Std-883 M1005.9/ JESD22-A108 VDD= 4.0V; T_J= 150ºC	500 hrs.	1 x 77	1 x 77	Pass (0/77)	DOC-24933

Table 2: Package Reliability Results

Test Performed	TEST METHOD/ Conditions	Duration	Req'd Sample Size[2] (#LOT x SS)	Actual Sample Size[3] (#LOT x SS)	Result (REJ/SS)	Report #
HTOL	Mil-Std-883 M1005.9/ JESD22-A108 VDD= 4.0V; T_J= 150ºC	500 hrs.	3 x 77	3 x 95	Pass (0/281)[4]	DOC-12432
HTS	Mil-Std-883 M1008.2/ JESD22-A103 T_a= 150ºC	1,000 hrs.	1 x 77	1 x 100	Pass (0/100)	DOC-50855
HAST[1]	JESD22-A110 T_a= 130°C; RH= 85%; VDD= 2.75 V	96 hrs.	3 x 45	1 x 97 1 x 98 1 x 100	Pass (0/295)	DOC-50855
TC[1]	Mil-Std-883 M1010.8/ JESD22-A104 T_a= -65ºC to +150ºC	500 cyc.	3 x 45	1 x 96 1 x 97 1 x 100	Pass (0/293)	DOC-58055
TS[1]	JESD22—A105 T_a = -55ºC to +125ºC	100 cyc.	3 x 45	1 x 99 2 x 100	Pass (0/299)[4]	DOC-12432

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Table 2: Package Reliability Results (continued)

Test Performed	TEST METHOD/ Conditions	Duration	Req'd Sample Size[2] (#LOT x SS)	Actual Sample Size[3] (#LOT x SS)	Result (REJ/SS)	Report #
WBP	Mil-Std-883 M2011.8/ JESD22-B115/ Subcon specs.	-	3 x 10 bond	3 x 10	Pass (0/30)	DOC-58055
Physical Dimensions	Mil-Std-883 M2016/ JESD22-B100	-	3 x 10	3 x 10	Pass (0/30)	DOC-58055
Die Shear	Mil-Std-883 M2019.8	-	3 x 3	3 x 5	Pass (0/15)	DOC-58055
Solder-ability	Mil-Std-883 M2003.9/ JESD22-B102	-	3 x 5	3 x 5	Pass (0/15)	DOC-58055