

PCN Number: CO-06965	Contact: Elizabeth La Greca
Date Issued: 15 September 2014	Title: Director, Sales Operations
PCN Effective Date: 15 December 2014	Phone: 858-795-0106
Product(s) Affected: PE42641	Email: elagreca@psemi.com
Sample Availability: Now	
Change Control Board Approval #: CO-06965	
Change Category:	
Change Category: Wafer Fabrication Process	Shipping/Labeling
	Shipping/Labeling Equipment
Wafer Fabrication Process	
Wafer Fabrication Process Design/Mask Change	Equipment
Wafer Fabrication Process Design/Mask Change Singulation Process	Equipment Material

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.

	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	

Package BOM Comparison

*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.



Customer Acknowledgement of Receipt*:

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



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 = 150°C	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 = 150°C	500 hrs.	3 x 77	3 x 95	Pass (0/281) ⁴	DOC-12432
HTS	Mil-Std-883 M1008.2/ JESD22-A103 T _a = 150°C	1,000 hrs.	1 x 77	1 x 100	<u>Pass</u> (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	<u>Pass</u> (0/295)	DOC-50855
TC1	Mil-Std-883 M1010.8/ JESD22-A104 T _a = -65°C to +150°C	500 cyc.	3 x 45	1 x 96 1 x 97 1 x 100	<u>Pass</u> (0/293)	DOC-58055
TS ¹	JESD22—A105 T _a = -55℃ to +125℃	100 cyc.	3 x 45	1 x 99 2 x 100	Pass (0/299) ⁴	DOC-12432

*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.



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	<u>Pass</u> (0/30)	DOC-58055
Physical Dimensions	Mil-Std-883 M2016/ JESD22-B100	-	3 x 10	3 x 10	<u>Pass</u> (0/30)	DOC-58055
Die Shear	Mil-Std-883 M2019.8	-	3 x 3	3 x 5	<u>Pass</u> (0/15)	DOC-58055
Solder- ability	Mil-Std-883 M2003.9/ JESD22-B102	-	3 x 5	3 x 5	<u>Pass</u> (0/15)	DOC-58055