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Control No. PCN-14312

October 21, 2014

## PRODUCT/PROCESS CHANGE NOTIFICATION

TYPE OF CHANGE:	☐ Design		☐ Other
•		•	s policy of major change notification. act your regional Power Integrations

# **DESCRIPTION OF CHANGE**

Unisem (M) Berhad, located in Ipoh, Perak, Malaysia will be added for the packaging and assembly of all products in eSIP-7C (E) package. Unisem (M) Berhad is a qualified assembly site for other products in SO-8 (D), SMD-8 (G) and PDIP-8 (P) packages with excellent quality records.

### **REASON FOR CHANGE**

Improve manufacturing flexibility and diversification of manufacturing sites.

### PRODUCTS AFFECTED

Please see the table below.

Product Family	Ordering Part Numbers		
LinkSwitch $^{TM}$ -3	LNK6408E, LNK6418E, LNK6428E, LNK6448E		
LinkSwitch <sup>™</sup> -HP	LNK6xx3E – LNK6xx7E		
LinkSwitch <sup>™</sup> -PH	LNK403E – LNK410E, LNK413E – LNK420E		
LYTSwitch <sup>TM</sup> -2	LYT2004E, LYT2005E		
LYTSwitch <sup>TM</sup> -4	LYT4x11E – LYT4x18E, LYT4x21E – LYT4x28E		
TOPSwitch <sup>™</sup> -HX	TOP252EG – TOP262EG, TOP252EN – TOP262EN		
TOPSwitch <sup>™</sup> -JX	TOP264EG – TOP271EG		

### CONFIDENTIAL

The information in this report contains confidential and proprietary information of Power Integrations and its manufacturing partners. By receiving this report, the customer agrees to use this information for the sole purpose of addressing the issues reviewed in this report and to keep the contents confidential. If it becomes necessary for the customer to disclose this information to a third party, a non-disclosure agreement, which provides reasonable and customary protection for the disclosed information, must be executed.

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## **QUALIFICATION STATUS**

See Appendix 1 for the qualification report.

### **EFFECT ON CUSTOMER**

No adverse impact is expected in customers' applications. The product will be guaranteed to meet the datasheet limits.

### **EFFECTIVE DATE**

January 21, 2015. This date is subject to change. Products assembled at the current location will continue to be shipped after the addition.

## **SAMPLE AVAILABILITY**

Samples are available upon request. Please send requests for samples within two weeks after receipt of this notification to the local Power Integrations sales office. For customers that request samples, a reasonable accommodation will be made in order to allow time of customer's qualification in a case-specific manner.

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Appendix 1
Reliability Engineering
Qualification Report

Qualification Project: E142102 Date of Report: 04-Oct-2014 Prepared By: Nick Stanco Manager, Reliability Engineering

# Project: Unisem eSIP Package Qualification

#### **Summary:**

The eSIP-7C packages previously qualified for assembly at UTL have now been qualified for assembly at Unisem. Three eSIP qualification lots were subjected to a full set of reliability stress tests with no valid failures. A parameter characterization study was completed with acceptable results.

Based on acceptable reliability test results, eSIP-7C package is now fully qualified and approved for assembly at Unisem.

Qualification Vehicles: TOP270EG, LNK410EG

### **Reliability Test Descriptions and Conditions**

Test Name	Conditions	Specification
DOPL (Dynamic Operating Life Test)	Tj=125°C, Vd(peak)=580V	EIA/JESD22-A108-D
HTRB (High Temperature Reverse Bias Test)	Ta=150°C, Vd=580V, biased in off-state	EIA/JESD22-A108-D
THBT (Temperature Humidity Bias Test)	85°C, 85% RH, Vd=30V, biased in off-state	EIA/JESD22-A101-C
TMCL (Temperature Cycle, Air to Air)	-40°C to +125°C, unbiased	EIA/JESD22-A104-D

**DOPL (Dynamic Operating Life)** 

Product	Lot No.	Test Duration	No. Failures/Sample Size
TOP270EG	3C573D	1000 hours	0/47
LNK410EG	3C612A	1000 hours	0/47
LNK410EG	3F442B	1000 hours	0/46 (Note 1)

Note 1: one unit was electrically overstressed and removed from the sample population

### **HTRB** (High Temperature Reverse Bias)

Product	Lot No.	Test Duration	No. Failures/Sample Size
TOP270EG	3C573D	1000 hours	0/47
LNK410EG	3C612A	1000 hours	0/47
LNK410EG	3F442B	1000 hours	0/47

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THBT (Temperature Humidity Bias)

Product	Lot No.	Test Duration	No. Failures/Sample Size
TOP270EG	3C573D	1000 hours	0/47
LNK410EG	3C612A	1000 hours	0/20
LNK410EG	3F442B	1000 hours	0/20

**TMCL** (Temperature Cycling)

Product	Lot No.	Test Duration	No. Failures/Sample Size
TOP270EG	3C573D	850 cycles	0/47
LNK410EG	3C612A	850 cycles	0/47
LNK410EG	3F442B	850 cycles	0/47

**Conclusion**: Based on acceptable reliability test results, eSIP-7C package is now fully qualified and approved for assembly at Unisem.

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### **CUSTOMER ACKNOWLEDGEMENT**

Power Integrations requests you acknowledge the receipt of the above-mentioned PCN. If no acknowledgment is received within 30 days of this notification, Power Integrations will assume the change is acceptable. Lack of any additional response within 90 days of this notification further constitutes acceptance of the change.

Power Integrations reserves the right to ship either version manufactured after the effective date until the inventory of the earlier version has been depleted.

If you have any questions or need further assistance, please contact your regional Power Integrations sales office. Otherwise, please check the box below, acknowledging the receipt of the PCN.

The indicated Product/Process Change Notification was received by the undersigned authority.

Name/Title:	
Signature:	Date:
Email Address/Phone#:	
Company/Location:	
CUSTOMER COMMENTS	
Please email this signed form to pcn@powerint.com	specifying the PCN# in the subject.

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