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Control No. PCN-17064

February 22, 2017

PRODUCT/PROCESS CHANGE NOTIFICATION

TYPE OF CHANGE: Design Manufacturing Other

This notification is provided in accordance with Power Integrations policy of product/process change notification. If you have any questions or need further assistance, please contact your regional Power Integrations sales office.

DESCRIPTION OF CHANGE

XFAB Lubbock, Texas, USA is added as an alternative wafer fab site for *TopSwitch™-HX* products listed below. XFAB Lubbock, Texas, USA is one of the qualified wafer fab sites of Power Integrations products.

REASON FOR CHANGE

Improve manufacturing flexibility and diversification of manufacturing sites.

PRODUCTS AFFECTED

Part Numbers	Package
TOP252EG, TOP252EN, TOP252EN0004, TOP252ENAU, TOP253EG, TOP253EN, TOP253EN0004, TOP253EN0105, TOP253ENAU, TOP254EG, TOP254EG0105, TOP254EGAU, TOP254EN, TOP254EN0105, TOP254ENAU, TOP255EG, TOP255EN, TOP256EG, TOP256EN, TOP256EN0186, TOP257EG, TOP257EN, TOP257EN0004, TOP257EN0166, TOP257ENAU, TOP258EG, TOP258EN, TOP258EN0105, TOP258ENAU, TOP259EG, TOP259EN, TOP260EG, TOP260EN, TOP260EN0004, TOP260ENAU, TOP261EG, TOP261EN	eSIP-7C
TOP252GN, TOP253GN, TOP254GN, TOP255GN, TOP256GN, TOP257GN, TOP257GN0004, TOP257GN0166, TOP257GNAU, TOP258GN	SMD-8C
TOP252PG, TOP252PN, TOP252PN0004, TOP252PNAU, TOP253PG, TOP253PN, TOP253PN0004, TOP253PN0105, TOP253PN0152, TOP253PN0166, TOP253PNAU, TOP254PG, TOP254PN, TOP254PN0105, TOP255PG, TOP255PN, TOP256PG, TOP256PN, TOP256PN0004, TOP256PN0105, TOP256PNAU, TOP257PG, TOP257PN, TOP258PG, TOP258PN, TOP258PN0004, TOP258PN0054, TOP258PNAU	PDIP-8C
TOP254YN, TOP255YN, TOP255YNAU, TOP256YN, TOP256YN0004, TOP256YN0143, TOP256YNAU, TOP257YN, TOP257YN0004, TOP257YN0166, TOP257YNAU, TOP258YN, TOP258YN0004, TOP258YN0143, TOP258YN0166, TOP258YNAU, TOP259YN, TOP260YN, TOP261YN	TO-220-7C

QUALIFICATION STATUS

See Appendix 1 for the qualification report.

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EFFECT ON CUSTOMER

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

EFFECTIVE DATE

Refer to Effective Date in the Sample Availability Section. This date is subject to change. Products fabricated at the current locations will continue to be shipped after the addition.

SAMPLE AVAILABILITY

Part Numbers	Package	Availability Date	Effective Date
TOP252EG, TOP252EN, TOP252EN0004, TOP252ENAU, TOP254EG, TOP254EG0105, TOP254EGAU, TOP254EN, TOP254EN0105, TOP254ENAU, TOP261EG, TOP261EN	eSIP-7C	4 weeks from date of request	May 22, 2017
TOP252GN, TOP254GN	SMD-8C		
TOP252PG, TOP252PN, TOP252PN0004, TOP252PNAU, TOP254PG, TOP254PN, TOP254PN0105	PDIP-8C		
TOP254YN, TOP261YN	TO-220-7C		
TOP253EG, TOP253EN, TOP253EN0004, TOP253EN0105, TOP253ENAU, TOP255EG, TOP255EN, TOP256EG, TOP256EN, TOP256EN0186, TOP257EG, TOP257EN, TOP257EN0004, TOP257EN0166, TOP257ENAU, TOP258EG, TOP258EN, TOP258EN0105, TOP258ENAU, TOP259EG, TOP259EN, TOP260EG, TOP260EN, TOP260EN0004, TOP260ENAU	eSIP-7C	12 weeks from date of request	June 22, 2017
TOP253GN, TOP255GN, TOP256GN, TOP257GN, TOP257GN0004, TOP257GN0166, TOP257GNAU, TOP258GN	SMD-8C		
TOP253PG, TOP253PN, TOP253PN0004, TOP253PN0105, TOP253PN0152, TOP253PN0166, TOP253PNAU, TOP255PG, TOP255PN, TOP256PG, TOP256PN, TOP256PN0004, TOP256PN0105, TOP256PNAU, TOP257PG, TOP257PN, TOP258PG, TOP258PN, TOP258PN0004, TOP258PN0054, TOP258PNAU	PDIP-8C		
TOP255YN, TOP255YNAU, TOP256YN, TOP256YN0004, TOP256YN0143, TOP256YNAU, TOP257YN, TOP257YN0004, TOP257YN0166, TOP257YNAU, TOP258YN, TOP258YN0004, TOP258YN0143, TOP258YN0166, TOP258YNAU, TOP259YN, TOP260YN	TO-220-7C		

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Appendix 1
Reliability Engineering
Qualification Report

Qualification Project: E164402
Date of Report: 17-Feb-2017

Project Title: TOPSwitch-HX XFAB Lubbock Wafer Fabrication Qualification

Summary:

TOPSwitch-HX products were subjected to reliability stress testing to qualify wafer fabrication in the the XFAB, Lubbock, Texas six inch wafer fab. A total of four qualification lots with three different package types using the largest die size for each package type were subjected to a full suite of reliability stress tests with passing results obtained in all cases. A cross-section of devices across the product family were selected and subjected to full temperature characterization, yield and applications analysis with acceptable results obtained.

Based on these results, all TOPSwitch-HX products are now approved for wafer fabrication in the XFAB, Lubbock, Texas six inch wafer fab.

Reliability Test Descriptions and Conditions

Test Name	Conditions	Reference Specification
DOPL (Dynamic Operating Life Test)	Tj=125°C, Switching Powe Supply Configuration, Vd(peak) = 560V	EIA/JESD22-A108D
HTRB (High Temp Reverse Bias Test)	Ta=150°C; off-state bias, Vd = 560V	EIA/JESD22-A108D
THBT (Temperature Humidity Bias Test)	85°C, 85% RH; off-state bias, Vd = 30V	EIA/JESD22-A101C
TMCL (Temperature Cycle, Air to Air)	YN/PG Packages: -65°C to +150°C, air-to=air EG Package: -40°C to +125°C, air-to=air	EIA/JESD22-A104D
HALT (Highly Accelerated Life Test)	DOPL at Ta = 85°C, 85% RH, Tj=115C	EIA/JESD22-A103D

DOPL (Dynamic Operating Life)

Product	Lot	Package	Test Duration	Failures/Sample Size
TOP261EG	5J449A	eSIP-7C	1000 hours	0/47
TOP261YN	5J249A	TO-220-7C	1000 hours	0/47
TOP258PG	0M062C	PDIP-8C	1000 hours	0/47
TOP258PG	0W562B	PDIP-8C	1000 hours	0/47

HTRB (High Temperature Reverse Bias)

Product	Lot	Package	Test Duration	Failures/Sample Size
TOP261EG	5J449A	eSIP-7C	1000 hours	0/47
TOP261YN	5J249A	TO-220-7C	1000 hours	0/47
TOP258PG	0M062C	PDIP-8C	1000 hours	0/47
TOP258PG	0W562B	PDIP-8C	1000 hours	0/47

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THBT (Temperature Humidity Bias)

Product	Lot	Package	Test Duration	Failures/Sample Size
TOP261EG	5J449A	eSIP-7C	1000 hours	0/47
TOP261YN	5J249A	TO-220-7C	1000 hours	0/47
TOP258PG	0M062C	PDIP-8C	1000 hours	0/47
TOP258PG	0W562B	PDIP-8C	1000 hours	0/47

TMCL (Temperature Cycling)

Product	Lot	Package	Test Duration	Failures/Sample Size
TOP261EG	5J449A	eSIP-7C	1700 cycles	0/47
TOP261YN	5J249A	TO-220-7C	1000 cycles	0/47
TOP258PG	0M062C	PDIP-8C	1000 cycles	0/47
TOP258PG	0W562B	PDIP-8C	1000 cycles	0/47

HALT (Highly Accelerated Life Test)

Product	Lot	Package	Test Duration	Failures/Sample Size
TOP261EG	5J449A	eSIP-7C	1000 hours	0/20
TOP261YN	5J249A	TO-220-7C	1000 hours	0/20
TOP258PG	0M062C	PDIP-8C	1000 hours	0/20

Conclusion: Based on the above qualification results, all TOPSwich-HX products are now approved for wafer fabrication in the XFAB, Lubbock, Texas six inch wafer fab

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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@power.com specifying the PCN# in the subject.

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