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Control No. PCN-16091

March 21, 2016

### 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

The assembly process of the affected products is being modified to add copper wire bonding as an alternative process. Currently, the affected products are assembled only with gold wire bonds. After implementation of this change, the products may be assembled with either copper or the current gold wire bonding processes.

#### REASON FOR CHANGE

Improvement in the manufacturing capacity and flexibility. The copper wire bonding process has been previously qualified and implemented for manufacturing of a majority of PI products since 2010. It has been widely adopted by the IC packaging industry in recent years. This change will provide Power Integrations access to additional bonding equipment at its contract manufacturing assembly facilities.

#### PRODUCTS AFFECTED

Products affected by the change are listed in Appendix 1.

#### QUALIFICATION STATUS

Refer to Appendix 2 for the qualification data.

#### EFFECT ON CUSTOMER

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

#### EFFECTIVE DATE

June 21, 2016. This date is subject to change. Products assembled with the wafers from the current fab will continue to be shipped after implementation of the above change.

#### SAMPLE AVAILABILITY

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

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**Appendix 1**

<b>Product Family</b>	<b>Part Numbers</b>
LinkSwitch™	LNK500GN, LNK501GN, LNK520GN
LinkZero™	LNK584GG, LNK585GG, LNK586GG
LinkSwitch™-II	LNK606GG, LNK616GG
LinkSwitch™-HF	LNK353GN, LNK354GN
	LNK353PN, LNK354PN
LinkSwitch™-LP	LNK562GN, LNK563GN, LNK564GN
LinkSwitch™-TN	LNK302GN, LNK304GN, LNK305GN, LNK306GN
LinkSwitch™-XT	LNK362GN, LNK364GN
TinySwitch™	TNY253GN, TNY253GN0112, TNY254GN, TNY254GN0112, TNY255GN, TNY255GN0152
	TNY253PN, TNY253PN0112, TNY254PN, TNY254PN0112, TNY255PN
TinySwitch™-II	CP1001GN, CP1002GN, TNY263GN, TNY264GN, TNY265GN, TNY266GN, TNY266GN0054, TNY267GN, TNY268GN
	CP1001PN, CP1002PN
TinySwitch™-III	TNY274GN, TNY275GN, TNY276GN, TNY277GN, TNY278GN, TNY279GN, TNY280GN
TinySwitch™-PK	TNY380GN
	TNY380PN
TOPSwitch™-II	TOP221GN, TOP222GN, TOP223GN, TOP224GN
	TOP221PN, TOP222PN, TOP223PN, TOP224PN
TOPSwitch™-FX	TOP232GN, TOP233GN, TOP234GN
	TOP232PN, TOP233PN, TOP234PN
TOPSwitch™-GX	TOP242GN, TOP243GN, TOP244GN, TOP245GN, TOP246GN
	TOP242PN, TOP243PN, TOP244PN, TOP245PN, TOP246PN
TOPSwitch™-HX	TOP252GN, TOP253GN, TOP254GN, TOP255GN, TOP256GN, TOP257GN, TOP258GN

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Appendix 2  
Reliability Engineering  
Qualification Report

Qualification Project: Various  
Date of Report: 16-Mar-2016  
Prepared By: Nick Stanco  
Manager, Reliability Engineering

<b>Project Title:</b> Qualification of Cu Wire for DIP-8 and SMD-8 Packaged Products
<b>Summary:</b>  Reliability testing was conducted to qualify Cu bond wire for DIP-8 and SMD-8 packages and for all products using those packages. Multiple lots of multiple product types were subjected to THBT, HTSL and TMCL reliability stress tests with passing results obtained in all cases. Yield and temperature characterization were completed with acceptable results for all affected products.  Based on these qualification results, Cu wire is approved for all DIP-8 and SMD-8 package options and for all PI products using those packages.
Qualification Vehicles: cross-section of device types using DIP-8 and SMD-8 packages

#### Reliability Test Descriptions and Conditions

Test Name	Conditions	Reference Specification
THBT (Temperature Humidity Bias Test)	85°C, 85% RH, Vd=30V, Vc/Vbp=5.8V	EIA/JESD22-A101C
HTSL (High Temperature Storage Life)	Ta=175°C, unbiased	EIA/JESD22-A103D
TMCL (Temperature Cycle, Air to Air)	-65°C to +150°C (PG package)	EIA/JESD22-A104D

#### THBT (Temperature Humidity Bias)

Product	Lot No.	Test Duration	No. Failures/Sample Size
LNK364PG	0G346B	1000 hours	0/47
LNK564PG	0E188D	1000 hours	0/47
LNK564PG	0E340J	1000 hours	0/47
LNK574GG	89956B	MSL4 + 1000 hours	0/47
LNK576GG	94011D	MSL4 + 1000 hours	0/47
LNK576GG	94292D	MSL4 + 1000 hours	0/47
LNK616GG	98790E	MSL4 + 1000 hours	0/47
TNY268PN	0L024C	1000 hours	0/47
TNY280GG	0A540A	MSL4 + 1000 hours	0/47
TNY280GG	0A540C	MSL4 + 1000 hours	0/47
LNK306GN	3R981K	MSL4 + 1000 hours	0/47
LNK501GN	3G956G	MSL4 + 1000 hours	0/47
TNY280PN	0N520E	1000 hours	0/47
TOP258GN	3P708C	MSL4 + 1000 hours	0/47

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**(High Temperature Storage Life)**

Product	Lot No.	Test Duration	No. Failures/Sample Size
LNK364PG	0G346B	1000 hours	0/47
LNK564PG	0E188D	1000 hours	0/47
LNK564PG	0E340J	1000 hours	0/47
LNK574GG	89956B	MSL4 + 1000 hours	0/47
LNK576GG	94011D	MSL4 + 1000 hours	0/47
LNK576GG	94292D	MSL4 + 1000 hours	0/47
LNK616GG	98790E	MSL4 + 1000 hours	0/47
TNY268PN	0L024C	1000 hours	0/47
TNY280GG	0A540A	MSL4 + 1000 hours	0/47
TNY280GG	0A540C	MSL4 + 1000 hours	0/47
LNK306GN	3R981K	MSL4 + 1000 hours	0/47
LNK501GN	3G956G	MSL4 + 1000 hours	0/47
TNY280PN	0N520E	1000 hours	0/47
TOP258GN	3P708C	MSL4 + 1000 hours	0/47

**TMCL (Temperature Cycling)**

Product	Lot No.	Test Duration	No. Failures/Sample Size
LNK306PG	3Q509H	1000 Cycles	0/47
LNK306PN	3R981C	1000 Cycles	0/47
LNK306PN	3R981E	1000 Cycles	0/47
LNK306PN	3R981G	1000 Cycles	0/47
LNK306PN	3S042C	1000 Cycles	0/47
LNK306PN	3S042E	1000 Cycles	0/47
LNK306PN	3S042G	1000 Cycles	0/47
LNK364PG	0G346B	1000 Cycles	0/47
LNK501PN	3G956E	1000 Cycles	0/47
LNK501PN	3H961C	1000 Cycles	0/47
LNK501PN	3J627D	1000 Cycles	0/47
LNK564PG	0E188D	1000 Cycles	0/47
LNK564PG	0E340J	1000 Cycles	0/47
LNK574GG	89956B	MSL4 + 1000 Cycles	0/47
LNK576GG	94011D	MSL4 + 1000 Cycles	0/47
LNK576GG	94292D	MSL4 + 1000 Cycles	0/47
LNK616GG	98790E	MSL4 + 1000 Cycles	0/47
TN253PN	0J013A	1000 Cycles	0/47
TN254PN	0J011A	1000 Cycles	0/47
TN255PN	0G322C	1000 Cycles	0/47
TNY255GN	3Y171H	MSL4 + 1000 Cycles	0/47
TNY255GN	3Y171I	MSL4 + 1000 Cycles	0/47
TNY280GG	0A540A	MSL4 + 1000 Cycles	0/47
TNY280GG	0A540C	MSL4 + 1000 Cycles	0/47
TOP246GN	3S007B	MSL4 + 1000 Cycles	0/47

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TOP246GN	3S007C	MSL4 + 1000 Cycles	0/47
TOP246GN	3S007D	MSL4 + 1000 Cycles	0/47
TOP258GN	3L794D	MSL4 + 1000 Cycles	0/47
TOP258GN	3L794E	MSL4 + 1000 Cycles	0/47
TOP258GN	3L794F	MSL4 + 1000 Cycles	0/47
TOP258GN	3N787C	MSL4 + 1000 Cycles	0/47
TOP258GN	3N787D	MSL4 + 1000 Cycles	0/47
TOP258GN	3N787E	MSL4 + 1000 Cycles	0/47
TOP258PG	3K153D	1000 Cycles	0/47
TOP258PG	3K153E	1000 Cycles	0/47
TOP258PG	3J852D	1000 Cycles	0/47
TOP258PG	3J852E	1000 Cycles	0/47
TOP258PG	3P708A	1000 Cycles	0/47
LNK306GN	3R981K	MSL4 + 1000 Cycles	0/47
LNK306PG	3Q509I	1000 Cycles	0/47
LNK501GN	3G956G	MSL4 + 1000 Cycles	0/47
LNK501PN	3G956F	1000 Cycles	0/47
TNY255GN	3Y171J	MSL4 + 1000 Cycles	0/47
TNY255GN	3Y171K	MSL4 + 1000 Cycles	0/47
TNY255GN	3Y171L	MSL4 + 1000 Cycles	0/47
TOP246GN	3S007E	MSL4 + 1000 Cycles	0/47
TOP246GN	3S007F	MSL4 + 1000 Cycles	0/47
TOP246GN	3S007G	MSL4 + 1000 Cycles	0/47
TOP258GN	3P708C	MSL4 + 1000 Cycles	0/47
TOP258PG	3P708B	1000 Cycles	0/47

**Conclusion:** Based on these qualification results, Cu wire is approved for all DIP-8 and SMD-8 package options and for all PI products using those packages.

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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**

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