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Control No. PCN-17091
Add Reliability Qualification Data

March 21, 2017
April 27, 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

Huatian Technology Company Limited (TSHT), a qualified assembly and test site of Power Integrations, located in Gansu, China; is added as an alternative assembly and test site for the PDIP and SMD packages.

PDIP and SMD assembly and test equipment from Millennium Microtech (Shanghai) Company Limited (MMS), a subsidiary of TSHT, will be transferred to TSHT. Power Integrations products will no longer be assembled at MMS after the completion of the transfer. The last date of production at MMS will be June 31, 2017.

REASON FOR CHANGE

Discontinuation of production at MMS.

PRODUCTS AFFECTED

Refer to Appendix 1 for the products affected.

QUALIFICATION STATUS

Refer to Appendix 2 for the qualification data.

EFFECT ON CUSTOMER

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

EFFECTIVE DATE

June 21, 2017. This date is subject to change. Products assembled at the current assembly site will continue to be shipped after implementation of the above change.

SAMPLE AVAILABILITY

Samples will be available effective April 28, 2017.

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Appendix 1: Affected Products

Product Family	Part Numbers	Package
DPASwitch	DPA422PN, DPA423PN, DPA424PN, DPA425PN	PDIP-8
	DPA422GN, DPA423GN, DPA424GN, DPA425GN, DPA425GNAU, DPA425GN0004	SMD-8
LinkSwitch	LNK500PN, LNK501PN, LNK520PN	PDIP-8B
	LNK500GN, LNK501GN, LNK520GN	SMD-8B
LinkSwitch-II	LNK603PG, LNK603PGAU, LNK603PG0004, LNK604PG, LNK604PGAU, LNK604PG0004, LNK605PG, LNK605PGAU, LNK605PG0004, LNK605PG0054, LNK606PG, LNK606PGAU, LNK613PG, LNK614PG, LNK615PG, LNK616PG, LNK616PGAU, LNK623PG, LNK623PGAU, LNK624PG, LNK624PGAU, LNK624PG0004, LNK624PG0105, LNK625PG, LNK626PG, LNK626PGAU, LNK626PG0004, LNK626PG0105	PDIP-8C
	LNK606GG, LNK616GG	SMD-8C
LinkSwitch-HF	LNK353PN, LNK354PN	PDIP-8B
	LNK353GN, LNK354GN	SMD-8B
LinkSwitch-LP	LNK562PG, LNK562PN, LNK562PNAU, LNK562PN0105, LNK563PG, LNK563PN, LNK564PG, LNK564PN, LNK564PNAU	PDIP-8B
	LNK562GN, LNK563GN, LNK564GN	SMD-8B
LinkSwitch-TN	LNK302PG, LNK302PN, LNK302PNAU, LNK302PN0004, LNK302PN0105, LNK302PN0166, LNK304PG, LNK304PN, LNK304PNAU, LNK304PN0004, LNK304PN0105, LNK304PN0152, LNK304PN0166, LNK305PN, LNK305PNAU, LNK305PN0004, LNK305PN0105, LNK306PN, LNK306PNAU, LNK306PN0105, LNK306PN0166	PDIP-8B
	LNK302GN, LNK302GNAU, LNK302GN0004, LNK302GN0166, LNK304GN, LNK304GNAU, LNK304GN0004, LNK304GN0087, LNK304GN0166, LNK305GN, LNK305GNAU, LNK305GN0004, LNK305GN0105, LNK305GN0166, LNK306GN, LNK306GNAU, LNK306GN0004, LNK306GN0105, LNK306GN0152	SMD-8B
LinkSwitch-TN2	LNK3202P, LNK3204P, LNK3205P, LNK3206P	PDIP-8C
	LNK3202G, LNK3204G, LNK3205G, LNK3206G	SMD-8C
LinkSwitch-XT	LNK362PG, LNK362PN, LNK362PNAU, LNK362PN0004, LNK363PG, LNK363PN, LNK363PNAU, LNK363PN0105, LNK364PG, LNK364PN, LNK364PNAU, LNK364PN0146, LNK364PN0209	PDIP-8B
	LNK362GN, LNK363GN, LNK363GNAU, LNK363GN0152, LNK364GN, LNK364GNAU, LNK364GN0105, LNK364GN0209	SMD-8B
LinkZero-AX	LNK584GG, LNK585GG, LNK586GG	SMD-8C
LYTSwitch-0	LYT0002P, LYT0004P, LYT0005P, LYT0005P0105, LYT0006P, LYT0006P0105, LYT0006P0146, SC1196P	PDIP-8B
TinySwitch	TNY253PN, TNY253PN0112, TNY254PN, TNY254PNAU, TNY254PN0112, TNY254PN0152, TNY255PN, TNY255PNAU, TNY256PN	PDIP-8
	TNY253GN, TNY253GN0112, TNY254GN, TNY254GN0112, TNY255GN, TNY255GN0152, TNY256GN	SMD-8

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Appendix 1: Affected Products (... continued)

Product Family	Part Numbers	Package
TinySwitch-LT	TNY174PG, TNY174PN, TNY175PG, TNY175PN, TNY176PG, TNY176PN, TNY176PN0005, TNY177PG, TNY177PGAU, TNY177PN, TNY178PG, TNY178PN, TNY179PG, TNY179PN, TNY179PNAU, TNY180PG, TNY180PN, TNY180PNAU, TNY180PN0166	PDIP-8C
TinySwitch-PK	TNY380PN, TNY380PNAU, TNY380PN0152	PDIP-8C
	TNY380GN, TNY380GNAU, TNY380GN0152	SMD-8C
TinySwitch-2	CP1001PN, CP1002PN, SC1009PN, TNY263PG, TNY263PN, TNY264PG, TNY264PN, TNY264PNAU, TNY264PN0004, TNY264PN0087, TNY264PN0152, TNY265PG, TNY265PN, TNY265PNAU, TNY265PN0004, TNY265PN0105, TNY266PG, TNY266PN, TNY266PNAU, TNY266PN0004, TNY266PN0087, TNY266PN0105, TNY266PN0190, TNY267PG, TNY267PN, TNY267PNAU, TNY267PN0004, TNY267PN0087, TNY267PN0105, TNY268PG, TNY268PN, TNY268PNAU, TNY268PN0004, TNY268PN0087, TNY268PN0152	PDIP-8B
	CP1001GN, CP1002GN, TNY263GN, TNY263GNAU, TNY263GN0105, TNY264GN, TNY264GNAU, TNY264GN0004, TNY264GN0152, TNY265GN, TNY266GN, TNY266GNAU, TNY266GN0004, TNY266GN0054, TNY266GN0152, TNY267GN, TNY267GNAU, TNY267GN0004, TNY267GN0087, TNY268GN, TNY268GNAU, TNY268GN0152, TNY268GN0166	SMD-8B
TinySwitch-III	SC1128PG, SC1129PG, SC1138PG, TNY274PG, TNY274PGAU, TNY274PN, TNY274PNAU, TNY274PN0166, TNY275PG, TNY275PGAU, TNY275PG0152, TNY275PN, TNY275PNAU, TNY275PN0004, TNY275PN0152, TNY276PG, TNY276PGAU, TNY276PN, TNY276PNAU, TNY276PN0054, TNY276PN0105, TNY276PN0152, TNY276PN0166, TNY277PG, TNY277PGAU, TNY277PG0206, TNY277PN, TNY277PNAU, TNY277PN0152, TNY277PN0164, TNY277PN0166, TNY277PN0190, TNY277PN0206, TNY278PG, TNY278PGAU, TNY278PN, TNY278PNAU, TNY278PN0004, TNY278PN0005, TNY278PN0054, TNY278PN0152, TNY278PN0164, TNY279PG, TNY279PGAU, TNY279PG0179, TNY279PN, TNY279PNAU, TNY279PN0004, TNY279PN0054, TNY279PN0152, TNY280PG, TNY280PGAU, TNY280PN, TNY280PNAU, TNY280PN0004, TNY280PN0105, TNY280PN0152, TNY280PN0179	PDIP-8C
	TNY274GN, TNY274GNAU, TNY274GN0004, TNY274GN0152, TNY275GN, TNY275GNAU, TNY275GN0004, TNY275GN0152, TNY276GN, TNY276GNAU, TNY277GN, TNY277GNAU, TNY277GN0004, TNY277GN0152, TNY277GN0166, TNY278GN, TNY278GNAU, TNY278GN0004, TNY278GN0054, TNY278GN0152, TNY279GN, TNY279GNAU, TNY279GN0105, TNY279GN0152, TNY280GN, TNY280GNAU, TNY280GN0105, TNY280GN0152	SMD-8C
TinySwitch-4	TNY284PG, TNY285PG, TNY285PG0004, TNY286PG, TNY287PG, TNY288PG, TNY288PG0004, TNY289PG, TNY290PG, TNY290PG0105	PDIP-8C

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Appendix 1: Affected Products (... continued)

Product Family	Part Numbers	Package
TOPSwitch-FX	TOP232PN, TOP233PN, TOP234PN	PDIP-8B
	TOP232GN, TOP233GN, TOP234GN	SMD-8B
TOPSwitch-GX	TOP242PN, TOP242PNAU, TOP242PN0166, TOP243PN, TOP243PNAU, TOP244PN, TOP244PNAU, TOP245PN, TOP245PNAU, TOP245PN0152, TOP246PN, TOP246PNAU, TOP246PN0087	PDIP-8B
	TOP242GN, TOP243GN, TOP244GN, TOP245GN, TOP246GN	SMD-8B
TOPSwitch-HX	TOP252PG, TOP252PN, TOP252PNAU, TOP252PN0004, TOP253P, TOP253PG, TOP253PN, TOP253PNAU, TOP253PN0004, TOP253PN0105, TOP253PN0152, TOP253PN0166, TOP254PG, TOP254PN, TOP254PN0105, TOP255PG, TOP255PN, TOP256PG, TOP256PN, TOP256PNAU, TOP256PN0004, TOP256PN0105, TOP257PG, TOP257PN, TOP258PG, TOP258PN, TOP258PNAU, TOP258PN0004, TOP258PN0054	PDIP-8C
	TOP252GN, TOP253GN, TOP254GN, TOP255GN, TOP256GN, TOP257GN, TOP257GNAU, TOP257GN0004, TOP257GN0166, TOP258GN	SMD-8C
TOPSwitch-2	TOP221PN, TOP222PN, TOP222PNAU, TOP223PN, TOP224PN	PDIP-8
	TOP221GN, TOP222GN, TOP223GN, TOP224GN	SMD-8

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Project Title: TSHT Assembly Site Qualification for PDIP and SMD Packages

Summary:

Reliability testing was conducted to qualify Huatian Technology Company Limited (TSHT) as an alternative assembly site for the PDIP and SMD packages. TSHT is a qualified assembly site for other Power Integrations products.

A full suite of reliability stress tests were conducted on three TSHT-assembled qualification lots selected as representative of the multiple affected product families; passing results were obtained for all qualification lots.

Yield and temperature characterization was completed for each product family with acceptable results obtained.

Based on these qualification results, TSHT is now qualified and approved for assembly of all products using PDIP and SMD packages.

Qualification Vehicles: LNK306PN (PDIP-8B), TOP258PG (PDIP-8C), TOP258GN (SMD-8C)

Reliability Test Descriptions and Conditions

Test Name	Conditions	Reference Specification
DOPL (Dynamic Operating Life Test)	Tj=125°C, Vd(peak)=560V, switching power supply configuration	EIA/JESD22-A108D
HTRB (High Temp Reverse Bias Test)	Ta=150°C; Vd=560V, Vc or VBP = 5.8V	EIA/JESD22-A108D
THBT (Temperature Humidity Bias Test)	85°C, 85% RH; Vd=30V, Vc or VBP = 5.8V	EIA/JESD22-A101C
HALT (Highly Accelerated Life Test)	DOPL at Ta = 85°C, 85% RH, Tj=115C	Internal Standard
TMCL (Temperature Cycle, Air to Air)	-65°C to +150°C, air to air	EIA/JESD22-A104D
HTSL (High Temperature Storage Life)	Ta=175°C, unbiased	EIA/JESD22-A103D
MSL4 Preconditioning	24-hr 150°C Bake + 96-hr 30°C, 60% RH Moisture Soak + 3 Passes 250C Solder Reflow	EIA/JESD22-A113D

DOPL (Dynamic Operating Life)

Product	Description	Assy Lot	Package	Test Duration	Failures/Sample Size
LNK306PN	TSHT Qual Lot 1	5L664B	PDIP-8B	1000 hours	0/47
TOP258PG	TSHT Qual Lot 2	5R890D	PDIP-8C	1000 hours	0/47
TOP258GN	TSHT Qual Lot 3	5R890E	SMD-8C	MSL4 + 1000 hours	0/47

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HTRB (High Temperature Reverse Bias)

Product	Description	Assy Lot	Package	Test Duration	Failures/Sample Size
LNK306PN	TSHT Qual Lot 1	5L664B	PDIP-8B	1000 hours	0/47
TOP258PG	TSHT Qual Lot 2	5R890D	PDIP-8C	1000 hours	0/47
TOP258GN	TSHT Qual Lot 3	5R890E	SMD-8C	MSL4 + 1000 hours	0/47

THBT (Temperature Humidity Bias)

Product	Description	Assy Lot	Package	Test Duration	Failures/Sample Size
LNK306PN	TSHT Qual Lot 1	5L664B	PDIP-8B	1000 hours	0/47
TOP258PG	TSHT Qual Lot 2	5R890D	PDIP-8C	1000 hours	0/47
TOP258GN	TSHT Qual Lot 3	5R890E	SMD-8C	MSL4 + 1000 hours	0/47

HALT (Highly Accelerated Life Test)

Product	Description	Assy Lot	Package	Test Duration	Failures/Sample Size
LNK306PN	TSHT Qual Lot 1	5L664B	PDIP-8B	1000 hours	0/20
TOP258PG	TSHT Qual Lot 2	5R890D	PDIP-8C	1000 hours	0/20
TOP258GN	TSHT Qual Lot 3	5R890E	SMD-8C	MSL4 + 1000 hours	0/20

TMCL (Temperature Cycling)

Product	Description	Assy Lot	Package	Test Duration	Failures/Sample Size
LNK306PN	TSHT Qual Lot 1	5L664B	PDIP-8B	1000 cycles	0/47
TOP258PG	TSHT Qual Lot 2	5R890D	PDIP-8C	1000 cycles	0/47
TOP258GN	TSHT Qual Lot 3	5R890E	SMD-8C	MSL4 + 1000 cycles	0/47

HTSL (High Temperature Storage Life)

Product	Description	Assy Lot	Package	Test Duration	Failures/Sample Size
LNK306PN	TSHT Qual Lot 1	5L664B	PDIP-8B	1000 hours	0/47
TOP258PG	TSHT Qual Lot 2	5R890D	PDIP-8C	1000 hours	0/47
TOP258GN	TSHT Qual Lot 3	5R890E	SMD-8C	MSL4 + 1000 hours	0/47

Conclusion: Based on these qualification results, TSHT is now qualified and approved for assembly of all products using PDIP and SMD 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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