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Control No. PCN-19112 April 10, 2019

# PRODUCT/PROCESS CHANGE NOTIFICATION

TYPE OF CHANGE:	Design	Manufacturing	Other	
This notification is provided	in accordance wit	h Power Integrations policy (	of major change notification	on. If you have any

### **DESCRIPTION OF CHANGE**

Hefei Tongfu Microelectronics Company Limited (HTF), a qualified manufacturing facility, located in Anhui, China, will be added as a qualified site for assembly and testing of Power Integrations products in the PDIP-8B, PDIP-8C, SMD-8B and SMD-8C packages as listed below.

There is neither change in the bill of materials nor manufacturing process.

questions or need further assistance, please contact your regional Power Integrations sales office.

### **REASON FOR CHANGE**

Improve manufacturing flexibility and diversification of manufacturing sites.

### **PRODUCTS AFFECTED**

Product Family	Part Number	Package
LinkSwitch-II	LNK603PG, LNK603PGAU, LNK603PG0004, LNK604PG, LNK604PGAU, LNK604PG0004, LNK605PG, LNK605PGAU, LNK605PG0054, LNK606PG, LNK606PGAU, LNK613PG, LNK614PG, LNK615PG, LNK616PG, LNK616PGAU,	PDIP-8C
	LNK606GG, LNK616GG	SMD-8C
LinkSwitch-CV	LNK623PG, LNK623PGAU, LNK624PG, LNK624PGAU, LNK624PG0004, LNK624PG0105, LNK625PG, LNK626PG, LNK626PGAU, LNK626PG0004	PDIP-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, LNK302PN0005, LNK302PN0054, LNK302PN0105, LNK302PN0166, LNK304PG, LNK304PN, LNK304PNAU, LNK304PN0004, LNK304PN0005, LNK304PN0105, LNK304PN0152, LNK304PN0166, LNK305PN, LNK305PNAU, LNK305PN0004, LNK305PN0105, LNK306PN, LNK306PNAU, LNK306PN0166	PDIP-8B

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Product Family	Part Number	Package
LinkSwitch-TN	LNK302GN, LNK302GNAU, LNK302GN0004, LNK302GN0166, LNK304GN, LNK304GNAU, LNK304GN0004, LNK304GN0087, LNK304GN0166, LNK305GN, LNK305GNAU, LNK305GN0004, LNK305GN0105, LNK305GN0166, LNK306GN, LNK306GNAU, LNK306GN0004, LNK306GN0105, LNK306GN0152	
LinkSwitch-TN2	LNK3202P, LNK3204P, LNK3205P, LNK3206P	PDIP-8C
	LNK3202G, LNK3204G, LNK3205G, LNK3206G	SMD-8C
LinkSwitch-XT2	LNK3604P	PDIP-8C
	LNK3604G	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-LT	TNY174PG, TNY174PN, TNY175PG, TNY175PN, TNY176PG, TNY176PN, TNY176PN0005, TNY177PG, TNY177PGAU, TNY177PN, TNY178PG, TNY178PN, TNY179PG, TNY179PN, TNY179PN, TNY179PN0004, TNY180PG, TNY180PN, TNY180PNAU, TNY180PN	PDIP-8C
TinySwitch-PK	TNY380PN, TNY380PNAU, TNY380PN0152	PDIP-8C
	TNY380GN, TNY380GNAU, TNY380GN0152	SMD-8C
TinySwitch-II	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, TNY267PN0152, 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, 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, TNY277PN0166, TNY277PN0190, TNY277PN0206, TNY278PG, TNY278PGAU, TNY278PN, TNY278PNAU, TNY278PN0004, TNY278PN0005, TNY278PN0054, TNY278PN0152, TNY279PG, TNY279PGAU, TNY279PG0179, TNY279PN,	PDIP-8C

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Product Family	Part Number	Package
TinySwitch-III	TNY279PNAU, TNY279PN0004, TNY279PN0054, TNY279PN0152, TNY280PG, TNY280PGAU, TNY280PN, TNY280PNAU, TNY280PN0004, TNY280PN0105, TNY280PN0152, TNY280PN0179	PDIP-8C
	TNY274GN, TNY274GNAU, TNY274GN0004, TNY274GN0152, TNY275GN, TNY275GNAU, TNY275GN0152, TNY275GN0209, TNY276GN, TNY276GNAU, TNY276GN0156, TNY277GN, TNY277GNAU, TNY277GN0004, TNY277GN0152, TNY277GN0156, TNY277GN0166, TNY278GN, TNY278GNAU, TNY278GN0004, TNY278GN0054, TNY278GN0152, TNY279GN, TNY279GNAU, TNY279GN0105, TNY279GN0152, TNY280GN, TNY280GNAU, TNY280GN0105, TNY280GN0152, TNY280GN0156, TNY280GN0209	SMD-8C
TinySwitch-4	TNY284PG, TNY285PG, TNY285PG0004, TNY286PG, TNY287PG, TNY288PG, TNY288PG0004, TNY289PG, TNY290PG, TNY290PG0105	PDIP-8C
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, TOP246PNAU, TOP246PNAU, TOP246PNAU, TOP246PNO087	PDIP-8B
	TOP242GN, TOP243GN, TOP244GN, TOP245GN	SMD-8B
TOPSwitch-HX	TOP252PG, TOP252PN, TOP252PNAU, TOP252PN0004, TOP253P, TOP253PG, TOP253PN, TOP253PNAU, TOP253PN0004, TOP253PN0105, TOP253PN0152, TOP253PN0166, TOP254PG, TOP254PN, TOP254PN0105, TOP255PG, TOP255PN, TOP256PG, TOP256PNAU, TOP256PN0004, TOP256PN0105, TOP257PG, TOP257PN, TOP258PG, TOP258PN, TOP258PNAU, TOP258PN0004, TOP258PN0054	PDIP-8C
	TOP252GN, TOP253GN, TOP254GN, TOP255GN, TOP257GN, TOP257GNAU, TOP257GN0004, TOP257GN0166, TOP258GN	SMD-8C

### **QUALIFICATION STATUS**

Please refer to Appendix 1 for the qualification data.

### **EFFECT ON CUSTOMER**

No adverse impact is expected in manufacturers' applications. There is no change to the datasheet.

# **EFFECTIVE DATE**

July 10, 2019. This date is subject to change. Current products from the existing assembly and test site will continue to be shipped after implementation of the above changes.

### **SAMPLE AVAILABILITY**

Samples will be available 8 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.

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# Appendix 1 Reliability Engineering Qualification Report

Qualification Project: E190101

Project Title: Qualification of Hefei Tongfu Microelectronics Company Limited for PDIP and SMD Package Assembly

### **Qual Summary:**

Reliability testing was performed on a total of five product lots to qualify Hefei Tongfu Microelectronics Company Limited (HTF), located in Anhui, China, for assembly PDIP-8B, PDIP-8C, SMD-8B and SMD-8C packages. All required reliability tests were completed with passing results. Yield analysis and assembly-level testing were completed with acceptable results. Based on these results, HTF is qualified for assembly of all Power Integrations products in the PDIP-8B, PDIP-8C, SMD-8B and SMD-8C packages.

Qualification Vehicles: LNK306GN, TOP246GN, TNY280GN and TNY280PN

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

Test Name	Conditions	Reference Specification
DOPL (Dynamic Operating Life Test)	Tj=125°C, Vd <sub>(peak)</sub> =560V, Vsupply = VBP	EIA/JESD22-A108
HTRB (High Temperature Reverse Bias Test)	Ta=150°C; Vd=560V, Vsupply = VBP	EIA/JESD22-A108
THBT (Temperature Humidity Bias Test)	85°C, 85% RH, Vd=30V, Vsupply = VBP	EIA/JESD22-A101
TMCL (Temperature Cycle, Air to Air)	-65°C to +150°C, air to air	EIA/JESD22-A104
HTSL (High Temperature Storage Life)	Ta=150°C; unbiased	EIA/JESD22-A103
HALT (Humidity Accelerated Life Test)	DOPL bias condition; Tj=115°C, 85% RH	Internal Standard
MSL4 Preconditioning	24-hr 150C bake → 96-hr 30°C, 60% RH soak → 3 passes 260C solder reflow	IPC/JEDEC J-STD-020

# **DOPL (Dynamic Operating Life)**

Product	Lot #	Assembly Site	Test Duration	No. Failures/Sample Size
LNK306GN	7P807D	HTF	MSL4 + 1000 hours	0 / 47
TOP246GN	7Q180B	HTF	MSL4 + 1000 hours	0 / 47
TNY280GN	7N405C	HTF	MSL4 + 1000 hours	0 / 47
TNY280PN	7N404A	HTF	1000 hours	0 / 47

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

Product	Lot #	Assembly Site	Test Duration	No. Failures/Sample Size
LNK306GN	7P807D	HTF	MSL4 + 1000 hours	0 / 47
TOP246GN	7Q180B	HTF	MSL4 + 1000 hours	0 / 47
TNY280GN	7N405C	HTF	MSL4 + 1000 hours	0 / 47
TNY280PN	7N404A	HTF	1000 hours	0 / 47

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# **THBT (Temperature Humidity Bias)**

Product	Lot #	Assembly Site	Test Duration	No. Failures/Sample Size
LNK306GN	7P807D	HTF	MSL4 + 1000 hours	0 / 47
TOP246GN	7Q180B	HTF	MSL4 + 1000 hours	0 / 47
TNY280GN	7N405C	HTF	MSL4 + 1000 hours	0 / 47
TNY280PN	7N404A	HTF	1000 hours	0 / 47

# **TMCL (Temperature Cycling)**

Product	Lot #	Assembly Site	Test Duration	No. Failures/Sample Size
LNK306GN	7P807D	HTF	MSL4 + 1000 Cycles	0 / 47
TOP246GN	7Q180B	HTF	MSL4 + 1000 Cycles	0 / 47
TNY280GN	7N405C	HTF	MSL4 + 1000 Cycles	0 / 47
TNY280GN	7N405E	HTF	MSL4 + 1000 Cycles	0 / 47
TNY280PN	7N404A	HTF	1000 Cycles	0 / 47

# **HTSL (High Temperature Storage Life)**

Product	Lot #	Assembly Site	Test Duration	No. Failures/Sample Size
LNK306GN	7P807D	HTF	MSL4 + 1000 hours	0 / 47
TOP246GN	7Q180B	HTF	MSL4 + 1000 hours	0 / 47
TNY280GN	7N405C	HTF	MSL4 + 1000 hours	0 / 47
TNY280PN	7N404A	HTF	1000 hours	0 / 47

# **HALT (Humidity Accelerated Life Test)**

Product	Lot #	Assembly Site	Test Duration	No. Failures/Sample Size
LNK306GN	7P807D	HTF	MSL4 + 1000 hours	0 / 47
TOP246GN	7Q180B	HTF	MSL4 + 1000 hours	0 / 47
TNY280GN	7N405C	HTF	MSL4 + 1000 hours	0 / 47
TNY280PN	7N404A	HTF	1000 hours	0 / 47

**Conclusion**: Based on acceptable results, Hefei Tongfu Microelectronics Company Limited (HTF) is qualified for assembly of all Power Integrations products in the PDIP-8B, PDIP-8C, SMD-8B and SMD-8C 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.

Please email this signed form to <a href="mailto:pcn@power.com">pcn@power.com</a> specifying the PCN# in the subject.

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