

Control No. PCN-19301
Correct Moisture Sensitivity Level (see changes in blue)

Original: August 19, 2019
Revised: November 22, 2019

PRODUCT/PROCESS CHANGE NOTIFICATION

TYPE OF CHANGE: Design Manufacturing Other

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

DESCRIPTION OF CHANGE

Tianshui Huatian Technology (TSHT), a qualified manufacturing facility, located in Tianshui, China, will be added as a qualified site for assembly and testing of Power Integrations products in the eDIP and eSOP packages as listed below.

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

REASON FOR CHANGE

Improve manufacturing flexibility and diversification of manufacturing sites.

PRODUCTS AFFECTED

Product Family	Part Number	Package
LinkSwitch-3	LNK6407K, LNK6408K, LNK6417K, LNK6418K, LNK6427K, LNK6428K, LNK6448K, SC1161K0, SC1161K1, SC1161K2, SC1161KZ, SC1162K0, SC1162K1, SC1162K10216, SC1162K2, SC1162KZ	eSOP-12B
LinkSwitch-HP	LNK6663K, LNK6664K, LNK6664K1, LNK6665K, LNK6665K1, LNK6666K, LNK6667K, LNK6668K, LNK6669K, LNK6763K, LNK6764K, LNK6765K, LNK6766K, LNK6767K, LNK6767K190, LNK6768K, LNK6769K, LNK6769K0190, LNK6773K, LNK6774K, LNK6775K, LNK6775K0237, LNK6776K, LNK6776K0237, LNK6777K, LNK6777K0237, LNK6778K, LNK6779K, LNK6779K190	eSOP-12B
	LNK6663V, LNK6664V, LNK6665V, LNK6666V, LNK6667V, LNK6668V, LNK6669V, LNK6763V, LNK6764V, LNK6765V, LNK6766V, LNK6768V, LNK6769V, LNK6773V, LNK6774V, LNK6775V, LNK6776V, LNK6777V, LNK6778V, LNK6779V	eDIP-12B
LinkSwitch-PL	LNK457KG, LNK458KG, LNK460KG	eSOP-12B
	LNK457VG, LNK458VG, LNK460VG	eDIP-12B
LYTSwitch-2	LYT2004K, LYT2005K	eSOP-12B
TOPSwitch-JX	TOP264KG, TOP265KG, TOP266KG, TOP267KG, TOP268KG, TOP269KG, TOP270KG, TOP271KG	eSOP-12B
	TOP264VG, TOP264VGAU, TOP265VG, TOP265VGAU, TOP266VG, TOP266VG0054, TOP266VGAU, TOP267V, TOP267VG, TOP267VG0054, TOP267VGAU, TOP268VG, TOP269VG, TOP270VG, TOP271VG	eDIP-12B

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Product Family	Part Number	Package
TinySwitch-4	TNY284KG, TNY285KG, TNY285KG0152, TNY286KG, TNY286KG0156, TNY287KG, TNY287KG0152, TNY287KG0156, TNY288KG, TNY288KG0152, TNY289KG, TNY290KG, TNY290KG0156, TNY290KG0105	eSOP-12B

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

November 19, 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: E191803/E191807

Project Title: TSHT eDIP-12B and eSOP-12B Packages Assembly Site Qualification
Qual Summary: Reliability testing was performed on a representative selection of products in the eDIP-12B and eSOP-12B packages for qualification of TSHT as an additional assembly site for those 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, TSHT is qualified for assembly of all PI products in the eDIP-12B and eSOP-12B packages.
Qualification Vehicles: LNK460VG, TOP269VG, TOP271VG, LNK6448K, LNK6777K, TNY290KG

Reliability Test Descriptions and Conditions

Test Name	Conditions	Reference Specification
DOPL (Dynamic Operating Life Test)	Tj=125°C, Vd _(peak) =580V	EIA/JESD22-A108
HTRB (High Temperature Reverse Bias)	Ta=150°C, Vd _(peak) =580V	EIA/JESD22-A108
THBT (Temperature Humidity Bias Test)	85°C, 85% RH, Vd=30V, Vbp = Vshunt	EIA/JESD22-A101
TMCL (Temperature Cycle, Air to Air)	-40°C to +125°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 at Tj=115°C, 85% RH, Vd(peak)=580V	Internal Standard
MSL3 Preconditioning	24-hr 150C bake → 192-hr 30°C, 60% RH soak → 3 passes 260C solder reflow	IPC/JEDEC J-STD-020

DOPL (Dynamic Operating Life)

Product	Lot #	Package	Test Duration	No. Failures/Sample Size
LNK460VG	7W745C	eDIP-12B	1000 hours	0/47
TOP269VG	7X399B	eDIP-12B	1000 hours	0/47
TOP271VG	7Z066C	eDIP-12B	1000 hours	0/47
LNK6448K	7Z714B	eSOP-12B	MSL3 +1000 hours	0/47
LNK6777K	7R142B	eSOP-12B	MSL3 +1000 hours	0/45 (Note 1)
TNY290KG	7Z040C	eSOP-12B	MSL3 +1000 hours	0/47

Note 1: Sample size reduced, two units suffered EOS due to faulty DOPL burn-in hardware.

HTRB (High Temperature Reverse Bias)

Product	Lot #	Package	Test Duration	No. Failures/Sample Size
LNK460VG	7W745C	eDIP-12B	1000 hours	0/47
TOP269VG	7X399B	eDIP-12B	1000 hours	0/47
TOP271VG	7Z066C	eDIP-12B	1000 hours	0/47
LNK6448K	7Z714B	eSOP-12B	MSL3 +1000 hours	0/47
LNK6777K	7R142B	eSOP-12B	MSL3 +1000 hours	0/47
TNY290KG	7Z040C	eSOP-12B	MSL3 +1000 hours	0/47

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THBT (Temperature Humidity Bias)

Product	Lot #	Package	Test Duration	No. Failures/Sample Size
LNK460VG	7W745C	eDIP-12B	1000 hours	0/47
TOP269VG	7X399B	eDIP-12B	1000 hours	0/47
TOP271VG	7Z066C	eDIP-12B	1000 hours	0/47
LNK6448K	7Z714B	eSOP-12B	MSL3 +1000 hours	0/47
LNK6777K	7R142B	eSOP-12B	MSL3 +1000 hours	0/47
TNY290KG	7Z040C	eSOP-12B	MSL3 +1000 hours	0/47

TMCL (Temperature Cycling)

Product	Lot #	Package	Test Duration	No. Failures/Sample Size
LNK460VG	7W745C	eDIP-12B	850 cycles	0/47
TOP269VG	7X399B	eDIP-12B	850 cycles	0/47
TOP271VG	7Z066C	eDIP-12B	850 cycles	0/47
LNK6448K	7Z714B	eSOP-12B	MSL3 +850 cycles	0/47
LNK6777K	7R142B	eSOP-12B	MSL3 +850 cycles	0/47
TNY290KG	7Z040C	eSOP-12B	MSL3 +850 cycles	0/47

HTSL (High Temperature Storage Life)

Product	Lot #	Package	Test Duration	No. Failures/Sample Size
LNK460VG	7W745C	eDIP-12B	1000 hours	0/47
TOP269VG	7X399B	eDIP-12B	1000 hours	0/47
TOP271VG	7Z066C	eDIP-12B	1000 hours	0/47
LNK6448K	7Z714B	eSOP-12B	MSL3 +1000 hours	0/47
LNK6777K	7R142B	eSOP-12B	MSL3 +1000 hours	0/47

HALT (Humidity Accelerated Life Test)

Product	Lot #	Package	Test Duration	No. Failures/Sample Size
TOP269VG	7X399B	eDIP-12B	1000 hours	0/20
LNK6448K	7Z714B	eSOP-12B	MSL3 +1000 hours	0/20

Conclusion: Based on acceptable qualification results, TSHT is qualified for assembly of all PI products in the eDIP-12B and eSOP-12B 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

Please email this signed form to pcn@power.com specifying the PCN# in the subject.

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