

Control No. PCN-19342

October 18, 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

Hysol GR510-HP has been qualified and it will be added as alternate molding compound for the assembly of TOPSwitch-HX and TinySwitch-LT products in PDIP-8C and SMD-8C packages as listed below.

There is neither change to the manufacturing sites nor existing bill of materials other than the molding compound.

REASON FOR CHANGE

For increased manufacturing capacity and flexibility.

PRODUCTS AFFECTED

Product Family	Part Number	Package
TinySwitch-LT	TNY174PG, TNY174PN, TNY175PG, TNY175PN, TNY176PG, TNY176PN, TNY176PN0005, TNY177PG, TNY177PGAU, TNY177PN, TNY178PG, TNY178PN, TNY179PG, TNY179PN, TNY179PNAU, TNY179PN0004, TNY180PG, TNY180PN, TNY180PNAU, TNY180PN0166	PDIP-8C
TOPSwitch-HX	TOP252PG, TOP252PN, TOP252PNAU, TOP252PN0004, TOP252PN0241, TOP253P, TOP253PG, TOP253PN, TOP253PNAU, TOP253PN0004, TOP253PN0105, TOP253PN0152, TOP253PN0166, TOP253PN0241, 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

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.

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EFFECTIVE DATE

January 20, 2020. This date is subject to change. Products with the existing mold compound may continue to be shipped after the effective date.

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: E191701/E192503

Project Title: TOPSwitch-HX and TinySwitch-LT GR510-HP PDIP/SMD Mold Compound Qualification
Qual Summary:

Reliability testing was performed on a representative selection of products to qualify Hysol GR510-HP mold compound for assembly of TOPSwitch-HX and TinySwitch-LT products in the PDIP-8C and SMD-8C packages. Four PDIP and two SMD package qualification lots were subjected to a full suite of reliability stress tests with passing results obtained. Yield analysis and assembly-level testing were completed with acceptable results. Based on these results, GR510-HP mold compound is qualified for assembly of TOPSwitch-HX and TinySwitch-LT products in PDIP-8C and SMD-8C packages.

Qualification Vehicles: TNY290PG, TOP258PG, LNK3206P, TOP258GN, LNK3206G

Reliability Test Descriptions and Conditions

Test Name	Conditions	Reference Specification
DOPL (Dynamic Operating Life Test)	Tj=125°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)	-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 at Tj=115°C, 85% RH, Vd(peak)=580V	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 #	Package	Test Duration	No. Failures/Sample Size
TNY290PG	7P989B	PDIP-8C	1000 hours	0/45
TNY290PG	7P991B	PDIP-8C	1000 hours	0/45
TOP258PG	8A809B	PDIP-8C	1000 hours	0/45
LNK3206P	7F165I	PDIP-8C	1000 hours	0/45
TOP258GN	8A807B	SMD-8C	MSL4 +1000 hours	0/45
LNK3206G	8G012B	SMD-8C	MSL4 +1000 hours	0/45

THBT (Temperature Humidity Bias)

Product	Lot #	Package	Test Duration	No. Failures/Sample Size
TNY290PG	7P989B	PDIP-8C	1000 hours	0/45
TNY290PG	7P991B	PDIP-8C	1000 hours	0/45
TOP258PG	8A809B	PDIP-8C	1000 hours	0/45
LNK3206P	7F165I	PDIP-8C	1000 hours	0/45
TOP258GN	8A807B	SMD-8C	MSL4 +1000 hours	0/45
LNK3206G	8G012B	SMD-8C	MSL4 +1000 hours	0/45

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TMCL (Temperature Cycling)

Product	Lot #	Package	Test Duration	No. Failures/Sample Size
TNY290PG	7P989B	PDIP-8C	1000 cycles	0/45
TNY290PG	7P991B	PDIP-8C	1000 cycles	0/45
TOP258PG	8A809B	PDIP-8C	1000 cycles	0/45
LNK3206P	7F165I	PDIP-8C	1000 cycles	0/45
TOP258GN	8A807B	SMD-8C	MSL4 + 1000 cycles	0/45
LNK3206G	8G012B	SMD-8C	MSL4 + 1000 cycles	0/45

HTSL (High Temperature Storage Life)

Product	Lot #	Package	Test Duration	No. Failures/Sample Size
TNY290PG	7P989B	PDIP-8C	1000 hours	0/45
TNY290PG	7P991B	PDIP-8C	1000 hours	0/45
TOP258PG	8A809B	PDIP-8C	1000 hours	0/45
LNK3206P	7F165I	PDIP-8C	1000 hours	0/45
TOP258GN	8A807B	SMD-8C	MSL4 +1000 hours	0/45
LNK3206G	8G012B	SMD-8C	MSL4 +1000 hours	0/45

HALT (Humidity Accelerated Life Test)

Product	Lot #	Package	Test Duration	No. Failures/Sample Size
TNY290PG	7P989B	PDIP-8C	1000 hours	0/20
TNY290PG	7P991B	PDIP-8C	1000 hours	0/20
TOP258PG	8A809B	PDIP-8C	1000 hours	0/20
LNK3206P	7F165I	PDIP-8C	1000 hours	0/20
TOP258GN	8A807B	SMD-8C	MSL4 +1000 hours	0/20
LNK3206G	8G012B	SMD-8C	MSL4 +1000 hours	0/20

Conclusion: Based on acceptable qualification results, GR510-HP mold compound is qualified for assembly of all TOPSwitch-HX and TinySwitch-LT products in PDIP-8C 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.

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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