



Control No. PCN-20481

January 20, 2021

PRODUCT/PROCESS CHANGE NOTIFICATION

TYPE OF CHANGE: Design Manufacturing Other

This notification is being 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

Seiko Epson, Japan, an existing qualified wafer fabrication site, will be added for fabricating the products listed in this notification.

REASON FOR CHANGE

Improvement in the manufacturing capacity and flexibility.

PRODUCTS AFFECTED

Product Family	Part Numbers	Package
InnoSwitch3	SC1546C-HC15	InSOP-24D
InnoSwitch3-CE	INN3162C-H101, INN3162C-H102, INN3162C-H113, INN3162C-H114, INN3164C-H101, INN3164C-H102, INN3164C-H107, INN3164C-H111, INN3164C-H113, INN3164C-H114, INN3165C-H101, INN3165C-H102, INN3165C-H103, INN3165C-H104, INN3165C-H105, INN3165C-H109, INN3165C-H113, INN3165C-H114, INN3165C-H122, INN3166C-H101, INN3166C-H102, INN3166C-H105, INN3166C-H106, INN3166C-H109, INN3166C-H110, INN3166C-H113, INN3166C-H114, INN3167C-H101, INN3167C-H105, INN3167C-H107, INN3167C-H109, INN3167C-H114, INN3167C-H115, INN3167C-H122, INN3168C0234, INN3168C-H035, INN3168C-H101, INN3168C-H105, INN3168C-H106, INN3168C-H107, INN3168C-H109, INN3168C-H110, INN3168C-H111, INN3168C-H114, INN3168C-H116, SC1513C, SC1532C, SC1533C, SC1534C, SC1543C-HC10, SC1545C	InSOP-24D
	SC1556C	InSOP-24E
	SC1542K	eSOP-R16B
InnoSwitch3-CP	INN3264C-H201, INN3264C-H202, INN3264C-H220, INN3265C-H201, INN3265C-H202, INN3265C-H211, INN3265C-H214, INN3265C-H216, INN3266C-H203, INN3266C-H204, INN3266C-H206, INN3266C-H207, INN3266C-H210, INN3266C-H214, INN3266C-H217, INN3266C-H219, INN3267C-H205, INN3267C-H214, INN3267C-H217, INN3268C-H202, INN3268C-H207, INN3268C-H208, INN3268C-H209, INN3268C-H210, INN3268C-H212, INN3268C-H214, INN3268C-H215, INN3268C-H221, SC1540C, SC1544C, SC1544C-H010, SC1548C-H016, SC1548C-H023, SC1548C-HC32, SC1549C-HC30, SC1550C, SC1551C-HC26, SC1555C, SC1557C, SC1558C	InSOP-24D
InnoSwitch3-LT	SC1565K	eSOP-R16B

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InnoSwitch3-MX	INN3464C, INN3464C0245, INN3465C, INN3465C0245, INN3466C, INN3467C, INN3468C, SC1881C, SC1883C	InSOP-24D
	SC2500C	InSOP-24B
InnoSwitch3-Pro	INN3365C-H301, INN3365C-H302, INN3366C-H301, INN3366C-H302, INN3367C-H301, INN3367C-H302, INN3368C-H301, INN3368C-H302, INN3368C-H312, SC1702C, SC1702C-H051, SC1703C-H009, SC1707C, SC1709C, SC1710C, SC1711C-H007, SC1711C-H026, SC1712C-H014, SC1713C-H015, SC1738C-H034,	InSOP-24D
	SC1738C	InSOP-24E
LYTSwitch-3	LYT3314D, LYT3316D, LYT3318D	SO-16B
LYTSwitch-5	LYT5218D, LYT5218D	SO-16B
LYTSwitch-6	LYT6065C, LYT6067C, LYT6068C	InSOP-24D

QUALIFICATION STATUS

See Appendix 1 for the qualification report.

EFFECT ON CUSTOMER

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

EFFECTIVE DATE

April 20, 2021. This date is subject to change. Products fabricated at the current wafer fabrication site will continue to be shipped after implementation of the above change.

SAMPLE AVAILABILITY

Samples will be available 8 weeks from the date of request. Please send the request 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: E203001

Project Title: InnoSwitch3, LYTSwitch-3 and LYTSwitch-5 Additional MOSFET Fabrication Site Qualification

Qualification Summary:

Reliability testing was performed to qualify Seiko Epson, Japan as an additional wafer foundry for the power MOSFET used in select InnoSwitch3 (base, CE, CP, LT, MX and Pro), LYTSwitch-3 and LYTSwitch-5 products (see affected products list). Reliability testing was performed on three lots of SC1551C-HC26 and three lots of DL613B1CR kit parts for qualification of the additional MOSFET wafer fabrication site. All stress tests were completed with passing results. Yield analysis and characterization were completed on representative products from each product family with acceptable results. Based on these results, Seiko Epson, Japan is now qualified as an additional wafer foundry for the power MOSFET used in select InnoSwitch3, LYTSwitch-3 and LYTSwitch-5 products.

Qualification Vehicles: SC1551C-HC26 (InnoSwitch3-EP), and DL613B1CR (Kit Part, MOSFET in InSOP-24D package, controllers not connected)

Reliability Test Descriptions and Conditions

Test Name	Conditions	Reference Specification
DOPL (Dynamic Operating Life Test)	Tj=125°C, Vd _(peak) =520V (80% Rated BVDSS)	EIA/JESD22-A108
THBT (Temperature Humidity Bias Test)	85°C, 85% RH, Vd=30V	EIA/JESD22-A101
TMCL (Temperature Cycle, Air to Air)	-40°C to +125°C, air to air	EIA/JESD22-A104
HALT (Humidity Accelerated Life Test)	DOPL at Tj=115°C, 85% RH, Vd _(peak) =520V (80% Rated BVDSS)	Internal Standard
HTRB (High Temperature Reverse Bias)	Ta=150°C, Vd=520V, Vg=0V	EIA/JESD22-A108
HTGB (High Temperature Gate Bias)	Ta=150°C, Vg=10V, Vd=Vd=0V	EIA/JESD22-A108
MSL3 Preconditioning	24-hr 150°C Bake + 40-hr 60°C, 60% RH Moisture Soak + 3 Passes 260°C Solder Reflow	EIA/JESD22-A113

DOPL (Dynamic Operating Life)

Product	Lot #	Package	Test Duration	No. Failures/Sample Size
SC1551C-HC26	M9F604E	InSOP-24D	MSL3 + 1000 hours	0/45
SC1551C-HC26	M9F605E	InSOP-24D	MSL3 + 1000 hours	0/45
SC1551C-HC26	M9Q113A	InSOP-24D	MSL3 + 500 hours	0/45

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THBT (Temperature Humidity Bias)

Product	Lot #	Package	Test Duration	No. Failures/Sample Size
SC1551C-HC26	M9F604E	InSOP-24D	MSL3 + 1000 hours	0/45
SC1551C-HC26	M9F605E	InSOP-24D	MSL3 + 1000 hours	0/45
SC1551C-HC26	M9Q113A	InSOP-24D	MSL3 + 1000 hours	0/45

TMCL (Temperature Cycling)

Product	Lot #	Package	Test Duration	No. Failures/Sample Size
SC1551C-HC26	M9F604E	InSOP-24D	MSL3 + 850 cycles	0/45
SC1551C-HC26	M9F605E	InSOP-24D	MSL3 + 850 cycles	0/45
SC1551C-HC26	M9Q113A	InSOP-24D	MSL3 + 850 cycles	0/45

HALT (Humidity Accelerated Life Test)

Product	Lot #	Package	Test Duration	No. Failures/Sample Size
SC1551C-HC26	M9F604E	InSOP-24D	MSL3 + 1000 hours	0/20
SC1551C-HC26	M9F605E	InSOP-24D	MSL3 + 1000 hours	0/20
SC1551C-HC26	M9Q113A	InSOP-24D	MSL3 + 500 hours	0/20

HTRB (High Temperature Reverse Bias)

Product	Lot #	Package	Test Duration	No. Failures/Sample Size
DL613B1CR	M9F604B	InSOP-24D	MSL3 + 1000 hours	0/45
DL613B1CR	M9F605B	InSOP-24D	MSL3 + 1000 hours	0/45
DL613B1CR	M9Q113B	InSOP-24D	MSL3 + 1000 hours	0/45

HTGB (High Temperature Gate Bias)

Product	Lot #	Package	Test Duration	No. Failures/Sample Size
DL613B1CR	M9F604B	InSOP-24D	MSL3 + 1000 hours	0/45
DL613B1CR	M9F605B	InSOP-24D	MSL3 + 1000 hours	0/45
DL613B1CR	M9Q113B	InSOP-24D	MSL3 + 5000 hours	0/40

Conclusion: Based on acceptable qualification results, Seiko Epson, Japan is now qualified as an additional wafer foundry for the power MOSFET used in select InnoSwitch3 (base, CE, CP, LT, MX and Pro), LYTSwitch-3 and LYTSwitch-5 products (see Products Affected List).

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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: _____

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CUSTOMER COMMENTS

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

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