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Control No. PCN-18141

April 11, 2018

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

Power Integrations has completed qualifying eSOP-R16B package using the same bills of material as current process at Hana Semiconductor Company Limited, a qualified assembly and test site of Power Integrations, located in Ayutthaya, Thailand. Hana Semiconductor Company Limited is being added as an alternative assembly and test site for eSOP-R16B.

REASON FOR CHANGE

Addition of assembly and test site for increased manufacturing capacity and flexibility.

PRODUCTS AFFECTED

Product Family	Part Numbers
InnoSwitch-CE	INN2103K, INN2104K, INN2105K, INN2123K, INN2124K, INN2125K
InnoSwitch-CH	INN2003K, INN2004K, INN2005K, INN2005K0044, INN2023K, INN2024K, INN2025K
InnoSwitch-CP	INN2214K, INN2215K
InnoSwitch-EP	INN2603K, INN2604K, INN2605K, INN2605K1, INN2904K
InnoSwitch	SC1205K1, SC1221K, SC1222K, SC1223K, SC1224K, SC1225K, SC1226K, SC1229K, SC1229K0044, SC1229K1, SC1251K, SC1252K0184, SC1252K1, SC1253K, SC1255K, SC1259K, SC1262K, SC1262K0191, SC1271K

QUALIFICATION STATUS

Refer to Appendix 1 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

July 13, 2018. 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 8 weeks from the date of request.

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Appendix 1
Reliability Engineering
Qualification Report

Qualification Project: E180104

Project Title: Hana eSOP-R16B Package Qualification
Qual Summary:

Reliability testing was performed on three InnoSwitch-CP lots to qualify the eSOP-R16B package for assembly at Hana Semiconductor Company Limited. All required reliability tests were completed on the three required qualification lots with passing results. Yield analysis and assembly-level testing were completed with acceptable results. Based on these results, Hana is approved for assembly of all Power Integrations products in the eSOP-R16B package.

Qualification Vehicles: INN2215K

Reliability Test Descriptions and Conditions

Test Name	Conditions	Reference Specification
DOPL (Dynamic Operating Life Test)	T _j =125°C, V _{d(peak)} =580V	EIA/JESD22-A108-D
HTRB (High Temperature Reverse Bias Test)	T _a =150°C; V _d =580V, V _{bp} = 5.3V	EIA/JESD22-A108-D
THBT (Temperature Humidity Bias Test)	85°C, 85% RH, V _d =30V, V _{bp} = 5.3V	EIA/JESD22-A101-C
TMCL (Temperature Cycle, Air to Air)	-40°C to +125°C, air to air, unbiased	EIA/JESD22-A104-E
HTSL (High Temperature Storage Life)	T _a =150°C, unbiased	EIA/JESD22-A103-D
HALT (Humidity Accelerated Life Test)	DOPL T _j =115°C, 85% RH, V _{d(peak)} =580V	Internal Standard
MSL3 Preconditioning	24-hr 150C bake → 40-hr 60°C, 60% RH soak → 3 passes 260C solder reflow	IPC/JEDEC J-STD-020E

DOPL (Dynamic Operating Life)

Product	Lot #	Qualification Project	Test Duration	No. Failures/Sample Size
INN2215K	M6N336E	E180404	MSL3 + 1000 hours	0/47
INN2215K	M6P279B	E180404	MSL3 + 1000 hours	0/47
INN2215K	M6Q144B	E180404	MSL3 + 1000 hours	0/47

HTRB (High Temperature Reverse Bias)

Product	Lot #	Qualification Project	Test Duration	No. Failures/Sample Size
INN2215K	M6N336E	E180404	MSL3 + 1000 hours	0/47
INN2215K	M6P279B	E180404	MSL3 + 1000 hours	0/47
INN2215K	M6Q144B	E180404	MSL3 + 1000 hours	0/47

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THBT (Temperature Humidity Bias)

Product	Lot #	Qualification Project	Test Duration	No. Failures/Sample Size
INN2215K	M6N336E	E180404	MSL3 + 1000 hours	0/47
INN2215K	M6P279B	E180404	MSL3 + 1000 hours	0/47
INN2215K	M6Q144B	E180404	MSL3 + 1000 hours	0/47

TMCL (Temperature Cycling)

Product	Lot #	Qualification Project	Test Duration	No. Failures/Sample Size
INN2215K	M6N336E	E180404	MSL3 + 850 cycles	0/47
INN2215K	M6P279B	E180404	MSL3 + 850 cycles	0/47
INN2215K	M6Q144B	E180404	MSL3 + 850 cycles	0/47

HTSL (High Temperature Storage Life)

Product	Lot #	Qualification Project	Test Duration	No. Failures/Sample Size
INN2215K	M6N336E	E180404	MSL3 + 1000 hours	0/47
INN2215K	M6P279B	E180404	MSL3 + 1000 hours	0/47
INN2215K	M6Q144B	E180404	MSL3 + 1000 hours	0/47

HALT (Humidity Accelerated Life Test)

Product	Lot #	Qualification Project	Test Duration	No. Failures/Sample Size
INN2215K	M6N336E	E180709	MSL3 + 1000 hours	0/20
INN2215K	M6P279B	E180709	MSL3 + 1000 hours	0/20
INN2215K	M6Q144B	E180709	MSL3 + 1000 hours	0/20

Conclusion: Based on acceptable results, Hana is approved for assembly of all Power Integrations products in the eSOP-R16B package.

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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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