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### Control No. PCN-18361

September 12, 2018

## **PRODUCT/PROCESS CHANGE NOTIFICATION**

TYPE OF CHANGE:

Design

🔀 Manufacturing

🗌 Other

with Power Integrations policy of major change potification If you

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

Hana Semiconductor Co. Limited, located in Ayutthaya, Thailand will be added as a qualified manufacturing facility for assembly and testing of Power Integrations products in eeSIP package. Affected part numbers are listed below. Hana Semiconductors assembly process will use the same bills of materials (BOM) as the currently used assembly contract manufacturer for the affected part numbers.

There is no change to the data sheet.

### **REASON FOR CHANGE**

Improve manufacturing flexibility and diversification of manufacturing sites.

### PRODUCTS AFFECTED

LCS700HG, LCS700HG0186, LCS701HG, LCS702HG, LCS702HG0103, LCS703HG, LCS705HG, LCS708HG, LCS700LG, LCS701LG, LCS703LG, LCS705LG, LCS708LG

### QUALIFICATION STATUS

Qualification has been completed with passing results. Please refer to Appendix 1 for the qualification data.

#### **EFFECT ON CUSTOMER**

No adverse impact is expected in manufacturers' applications. The product will be guaranteed to meet the data sheet limits.

#### EFFECTIVE DATE

December 12, 2018

#### 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. For manufacturers that request samples, an accommodation will be made in order to allow time of customer's qualification in a case-specific manner.

### CONFIDENTIAL

The information in this report contains confidential and proprietary information of Power Integrations and its manufacturing partners. By receiving this report, the customer agrees to use this information for the sole purpose of addressing the issues reviewed in this report and to keep the contents confidential. If it becomes necessary for the customer to disclose this information to a third party, a non-disclosure agreement, which provides reasonable and customary protection for the disclosed information, must be executed.



Appendix 1 Reliability Engineering Qualification Report Qualification Project: E183207

## Project Title: Hana eeSIP-16 Package Qualifications

### **Qual Summary:**

Reliability testing was performed on three LCS708HG lots to qualify Hana for assembly of eeSIP-16 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, Hana is approved for assembly of all eeSIP-16 packages.

Qualification Vehicles: LCS708HG

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

Test Name	Conditions	<b>Reference Specification</b>
DOPL (Dynamic Operating Life Test)	Tj=125°C, Vd <sub>(peak)</sub> =425V	EIA/JESD22-A108
HTRB (High Temperature Reverse Bias Test)	Ta=150°C; Vd=425V	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=175°C, unbiased	EIA/JESD22-A103
HALT (Humidity Accelerated Life Test)	DOPL Tj=115°C, 85% RH, Vd(peak)= 425V	Internal Standard

### DOPL (Dynamic Operating Life)

Product	Lot #	Package / Assy Site	Test Duration	No. Failures/Sample Size
LCS708HG	M4N999L	eeSIP-16J / Hana	1000 hours	0/47
LCS708HG	M4N999M	eeSIP-16J / Hana	1000 hours	0/47
LCS708HG	M4N999N	eeSIP-16J / Hana	1000 hours	0/47

### HTRB (High Temperature Reverse Bias)

Product	Lot #	Package / Assy Site	Test Duration	No. Failures/Sample Size
LCS708HG	M4N999L	eeSIP-16J / Hana	1000 hours	0/47
LCS708HG	M4N999M	eeSIP-16J / Hana	1000 hours	0/47
LCS708HG	M4N999N	eeSIP-16J / Hana	1000 hours	0/47

#### THBT (Temperature Humidity Bias)

Product	Lot #	Package / Assy Site	Test Duration	No. Failures/Sample Size
LCS708HG	M4N999L	eeSIP-16J / Hana	1000 hours	0/47
LCS708HG	M4N999M	eeSIP-16J / Hana	1000 hours	0/47
LCS708HG	M4N999N	eeSIP-16J / Hana	1000 hours	0/47

## TMCL (Temperature Cycling)

Product	Lot #	Package / Assy Site	Test Duration	No. Failures/Sample Size
LCS708HG	M6V653A	eeSIP-16J / Hana	850 cycles	0/47
LCS708HG	M6V653B	eeSIP-16J / Hana	850 cycles	0/47
LCS708HG	M6V653C	eeSIP-16J / Hana	850 cycles	0/47

### HTSL (High Temperature Storage Life)

Product	Lot #	Package / Assy Site	Test Duration	No. Failures/Sample Size
LCS708HG	M4N999L	eeSIP-16J / Hana	1000 hours	0/47
LCS708HG	M4N999M	eeSIP-16J / Hana	1000 hours	0/47
LCS708HG	M4N999N	eeSIP-16J / Hana	1000 hours	0/47

## HALT (Humidity Accelerated Life Test)

Product	Lot #	Package / Assy Site	Test Duration	No. Failures/Sample Size
LCS708HG	M4N999L	eeSIP-16J / Hana	1000 hours	0/20
LCS708HG	M4N999M	eeSIP-16J / Hana	1000 hours	0/20
LCS708HG	M4N999N	eeSIP-16J / Hana	1000 hours	0/20

**Conclusion**: Based on acceptable results, Hana is approved for assembly of all eeSIP-16 packages.

### 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 <u>pcn@power.com</u> specifying the PCN# in the subject.