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Control No. PCN-19051

February 7, 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**

Hana Semiconductor Co. Limited, located in Ayutthaya, Thailand will be added as a qualified manufacturing facility for assembly and testing of the products listed in this notification. Hana Semiconductor assembly process will use the same bills of materials (BOM) as the existing assembly and test site for the affected part numbers.

There is no change to the data sheet.

**REASON FOR CHANGE**

For increased manufacturing capacity and flexibility.

**PRODUCTS AFFECTED**

Product Family	Part Number	Package
HiperPFS-3	PFS7523H, PFS7524H, PFS7525H, PFS7526H, PFS7527H, PFS7528H, PFS7529H, PFS7533H, PFS7534H, PFS7535H, PFS7536H, PFS7537H, PFS7538H, PFS7539H	eSIP-16D
	PFS7523L, PFS7524L, PFS7525L	eSIP-16G
HiperPFS-4	PFS7623H, PFS7624H, PFS7625H, PFS7626H, PFS7627H, PFS7628H, PFS7629H, PFS7633H, PFS7634H, PFS7635H, PFS7636H	eSIP-16D
	PFS7623L, PFS7624L, PFS7625L, PFS7626L, PFS7627L, PFS7628L, PFS7629L	eSIP-16G

**QUALIFICATION STATUS**

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**

May 7, 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.

**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.

**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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<b>Project Title:</b> Hana eSIP-16D and eSIP-16G Packages Qualification
<b>Summary:</b>  Reliability testing was conducted to qualify Hana for assembly and testing of the eSIP-16D and eSIP-16G packages supporting HiperPFS-3 and HiperPFS-4 products. Reliability qualification was performed and all of the required reliability stress tests were completed with acceptable results. Yield and temperature characterization were completed with acceptable results for all affected products.  Based on these qualification test results, Hana is approved for assembly and testing of all HiperPFS-3 and HiperPFS-4 products in the eSIP-16D and eSIP-16G packages.
Qualification Vehicles: PFS7629H (eSIP-16D); eSIP-16G is a lead-bend option of the eSIP-16D

#### Reliability Test Descriptions and Conditions

Test Name	Conditions	Reference Specification
HTRB (High Temp Reverse Bias Test)	Ta=150°C, Vd=480V, biased in off-state	EIA/JESD22-A108D
THBT (Temperature Humidity Bias Test)	85°C, 85% RH, Vd=30V, , biased in off-state	EIA/JESD22-A101C
TMCL (Temperature Cycle, Air to Air)	-40°C to +125°C, air-to-air	EIA/JESD22-A104D
HTSL (High Temperature Storage Life)	Ta=150°C, unbiased	EIA/JESD22-A103D

#### HTRB (High Temperature Reverse Bias)

Product	Lot Description	Lot No.	Test Duration	No. Failures/Sample Size
PFS7629H	Hana Qual Lot 1	M6J815A	1000 hours	0/47
PFS7629H	Hana Qual Lot 2	M6J815E	1000 hours	0/46 (Note 1)
PFS7629H	Hana Qual Lot 3	M4L146CT	1000 hours	0/47

Note 1: S/N 49 was removed from stress at 168 hours due to high IDSS but was later found to be invalid as the IDSS value was still within datasheet specifications

#### THBT (Temperature Humidity Bias)

Product	Lot Description	Lot No.	Test Duration	No. Failures/Sample Size
PFS7629H	Hana Qual Lot 1	M6J815A	1000 hours	0/47
PFS7629H	Hana Qual Lot 2	M6J815E	1000 hours	0/47
PFS7629H	Hana Qual Lot 3	M4L146CT	1000 hours	0/47

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**TMCL (Temperature Cycling)**

Product	Lot Description	Lot No.	Test Duration	No. Failures/Sample Size
PFS7629H	Hana Qual Lot 1	M6J815A	850 cycles	0/47
PFS7629H	Hana Qual Lot 2	M6J815E	850 cycles	0/47
PFS7629H	Hana Qual Lot 3	M4L146CT	850 cycles	0/47

**HTSL (High Temperature Storage Life)**

Product	Lot Description	Lot No.	Test Duration	No. Failures/Sample Size
PFS7629H	Hana Qual Lot 1	M6J815A	1000 hours	0/47
PFS7629H	Hana Qual Lot 2	M6J815E	1000 hours	0/47
PFS7629H	Hana Qual Lot 3	M4L146CT	1000 hours	0/47

**Conclusion:** Based on these qualification test results, Hana is approved for assembly and testing of all HiperPFS-3 and HiperPFS-4 products in the eSIP-16D and eSIP-16G 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**

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Please email this signed form to [pcn@power.com](mailto:pcn@power.com) specifying the PCN# in the subject.

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