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Control No. PCN-20071

March 26, 2020

**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**

Add an alternative equivalent MOSFET to the HiperPFS-3 product family. There is neither change to the manufacturing sites nor the existing bill of materials other than the equivalent MOSFET. There is also no change to the datasheet.

**REASON FOR CHANGE**

Manufacturing flexibility.

**PRODUCTS AFFECTED**

Part Numbers	Package
PFS7523H, PFS7524H, PFS7525H, PFS7526H, PFS7527H, PFS7528H, PFS7529H, PFS7533H, PFS7534H, PFS7535H, PFS7536H, PFS7537H, PFS7538H, PFS7539H	eSIP-16D
PFS7523L, PFS7524L, PFS7525L	eSIP-16G

**QUALIFICATION STATUS**

Refer to Appendix 1 for the qualification data.

**EFFECT ON CUSTOMER**

No adverse impact is expected in the manufacturers' applications.

**EFFECTIVE DATE**

June 26, 2020. This date is subject to change. Products assembled using the current MOSFET will continue to be shipped after implementation of the above change.

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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 12 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: E193903

**Project Title: HiperPFS-3 Alternative MOSFET Qualification****Qual Summary:**

Reliability testing was performed to qualify an alternative MOSFET for the HiperPFS-3 product family. The alternative MOSFET was previously qualified in the same eSIP-16x package with the similar HiperPFS-4 product family and data from that qualification was largely used here for qualification of the HiperPFS-3 family. All reliability stress tests were completed with passing results. Yield analysis and assembly-level testing were completed with acceptable results. Based on these results, the alternative MOSFET is qualified and approved for production of all HiperPFS-3 products.

Qualification Vehicles: PFS7529H (HiperPFS-3), PFS7629H (HiperPFS-4)

**Reliability Test Descriptions and Conditions**

Test Name	Conditions	Reference Specification
DOPL (Dynamic Operating Life Test)	T <sub>j</sub> =125°C, V <sub>d(peak)</sub> =80% Rated BVDSS	EIA/JESD22-A108
HTRB (High Temperature Reverse Bias)	T <sub>a</sub> =150°C, 80% Rated BVDSS	EIA/JESD22-A108
THBT (Temperature Humidity Bias Test)	85°C, 85% RH, V <sub>d</sub> =30V	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)	T <sub>a</sub> =150°C, unbiased	EIA/JESD22-A103
HALT (Humidity Accelerated Life Test)	DOPL at T <sub>j</sub> =115°C, 85% RH, V <sub>d(peak)</sub> =80% Rated BVDSS	Internal Standard

**DOPL (Dynamic Operating Life)**

Product	Lot #	Package	Test Duration	No. Failures/Sample Size
PFS7529H	M6J814E	eDIP-12B	1000 hours	0/45
PFS7629H	M4L146I	eSIP-16D	1000 hours	0/45
PFS7629H	M4L146K	eSIP-16D	1000 hours	0/45
PFS7629H	M4L146L	eSIP-16D	1000 hours	0/45
PFS7629H	M4L146P	eSIP-16D	1000 hours	0/45
PFS7629H	M4L146Q	eSIP-16D	1000 hours	0/45
PFS7629H	M6G662D	eSIP-16D	1000 hours	0/45

**HTRB (High Temperature Reverse Bias)**

Product	Lot #	Package	Test Duration	No. Failures/Sample Size
PFS7629H	M4L146I	eSIP-16D	1000 hours	0/45
PFS7629H	M4L146K	eSIP-16D	1000 hours	0/45
PFS7629H	M4L146L	eSIP-16D	1000 hours	0/45
PFS7629H	M4L146P	eSIP-16D	1000 hours	0/45
PFS7629H	M4L146Q	eSIP-16D	1000 hours	0/45
PFS7629H	M6G662D	eSIP-16D	1000 hours	0/45

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**THBT (Temperature Humidity Bias)**

Product	Lot #	Package	Test Duration	No. Failures/Sample Size
PFS7629H	M4L146CT	eSIP-16D	1000 hours	0/45
PFS7629H	M4L146I	eSIP-16D	1000 hours	0/45
PFS7629H	M4L146K	eSIP-16D	1000 hours	0/45
PFS7629H	M4L146L	eSIP-16D	1000 hours	0/45
PFS7629H	M6J815A	eSIP-16D	1000 hours	0/45
PFS7629H	M6J815B	eSIP-16D	1000 hours	0/45

**TMCL (Temperature Cycling)**

Product	Lot #	Package	Test Duration	No. Failures/Sample Size
PFS7629H	M4L146I	eSIP-16D	850 cycles	0/45
PFS7629H	M4L146K	eSIP-16D	850 cycles	0/45
PFS7629H	M4L146L	eSIP-16D	850 cycles	0/45
PFS7629H	M4L146P	eSIP-16D	850 cycles	0/45
PFS7629H	M4L146Q	eSIP-16D	850 cycles	0/45
PFS7629H	M6G662D	eSIP-16D	850 cycles	0/45

**HTSL (High Temperature Storage Life)**

Product	Lot #	Package	Test Duration	No. Failures/Sample Size
PFS7629H	M4L146CT	eSIP-16D	1000 hours	0/45
PFS7629H	M4L146I	eSIP-16D	1000 hours	0/45
PFS7629H	M4L146K	eSIP-16D	1000 hours	0/45
PFS7629H	M4L146L	eSIP-16D	1000 hours	0/45
PFS7629H	M6J815A	eSIP-16D	1000 hours	0/45
PFS7629H	M6J815B	eSIP-16D	1000 hours	0/45

**HALT (Humidity Accelerated Life Test)**

Product	Lot #	Package	Test Duration	No. Failures/Sample Size
PFS7629H	M4L146CT	eSIP-16D	1000 hours	0/20
PFS7629H	M4L146I	eSIP-16D	1000 hours	0/20
PFS7629H	M4L146K	eSIP-16D	1000 hours	0/20
PFS7629H	M4L146L	eSIP-16D	1000 hours	0/20
PFS7629H	M6J815A	eSIP-16D	1000 hours	0/20
PFS7629H	M6J815B	eSIP-16D	1000 hours	0/20

**Conclusion:** Based on acceptable qualification results, HiperPFS-3 products are qualified with the alternative MOSFET.

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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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