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PRODUCT/MANUFACTURING CHANGE NOTIFICATION

Control No. PCN-07491 **Date: 6-Dec-2007**

Type of Change: **Design:** ☐ **Manufacturing** ☒ **Other** ☐

In accordance with Power Integrations policy of critical change notification and JEDEC standard EIA/JESD-46 guidelines, we take this opportunity to serve you this notice. If you have any questions or need further assistance, please contact your area sales manager.

DESCRIPTION OF THE CHANGES:

Addition of Seiko-Epson wafer foundry, Sakata, Japan for fabrication of TinySwitch-III product family.

Seiko-Epson wafer foundry has been previously qualified to fabricate wafers for other PI products.

EFFECT ON PRODUCTS PREVIOUSLY SHIPPED: None

EFFECT ON PRODUCT QUALITY: None. Reliability testing results are included in the attached reliability report. There are no reliability issues. Seiko-Epson wafer foundry has been manufacturing wafers in high volume for many years. Please see the reliability report attached.

PART NUMBERS AFFECTED:

The following products will be fabricated at Seiko-Epson wafer foundry, Sakata, Japan for the first time TNY274-278 with PN, GN package options.

REASON FOR CHANGE: To increase manufacturing capacity and to ensure supply from multiple sources.

EFFECTIVE DATE: 06-Mar-2008

Please note that products with the above changes may begin to be shipped after the effective date stated above without further notice.

Reliability Engineering ***Qualification Report***

Qualification Report No: Q072501
Date: 11/28/2007
Author: Nick Stanco
Product Engineer: Ravil Safiullin

Project Title: Qualification of TNY274-278 (TinySwitch-III) Wafer Fabrication at Seiko-Epson	
Summary: Reliability testing was conducted on TNY278PN products per qual plan Q072501 for wafer fabrication qualification of TNY274-278 products in the Seiko-Epson Corporation (SEC) wafer Fab in Sakata, Japan. TNY278PN device was used as the qualification vehicle. Two TNY278PN qualification lots were subjected to reliability stress tests with satisfactory reliability results. This qualification is based on the reliability results on two lots of TNY278PN and prior qualification of TOPSwitch-GX and TinySwitch-II products that share the same process technology as TinySwitch-III products. The prior qualification results are described in qualification Q064203, which was provided to the customers under PCN07261 issued on July 3, 2007. Product parameter characterization was performed on all lots with acceptable results. Based on acceptable reliability stress test results and parameter characterization results, TNY274-278 products fabricated at Seiko-Epson Corporation (SEC) are now fully qualified and approved for production release. This release covers both PN and GN packages at all previously qualified assembly sites.	
Qualification Vehicles: TNY278PN	
Justification: Additional wafer fabrication site for selected TinySwitch-III products	
Material Affected: TNY274, TNY275, TNY276, TNY277 and TNY278 in the PN and GN packages	
Fab: Seiko-Epson Corporation (SEC) wafer Fab in Sakata, Japan.	Package types affected: DIP-08C, and SMD-08C

TNY278PN Reliability Test Results and Conditions

Test Name	TNY278PN Lot 46585A	TNY278PN Lot 47162A *	Duration/Conditions
DOPL	0/47	0/47	1,000 hours, Tj=125°C, Vd=560V
HTRB	0/47	0/47	1,000 hours, Ta=150°C, Vd=560V
Parameter Characterization Over Temperature	Passed	Passed	25°C & 125°C parametric stability analysis & -40°C /+25°C /+125°C temperature coefficient analysis

* Indicated lot was subjected to 260°C MSL4 preconditioning prior to DOPL and HTRB testing for GN package qualification

Conclusion:

Based on acceptable reliability stress test results as well as acceptable parameter characterization and analysis results, TNY274-278 products fabricated at Seiko-Epson Corporation (SEC) wafer Fab in Sakata, Japan are now fully qualified and approved for production release. This release covers both PN and GN packages at all previously qualified assembly sites.

Approvals

Approved By	Signature	Date
Reliability Engineer:	On File	On File
Product Engineering Manager:	On File	On File
Reliability Engineering Manager:	On File	On File
Director of Technology Development:	On File	On File
Director of Quality:	On File	On File