ON Semiconductor

INITIAL PRODUCT/PROCESS CHANGE NOTIFICATION #16600A

Generic Copy

Issue Date: 17-Mar-2011

TITLE: Initial Notification for Transfer of Filtering with ESD Protection Devices Die Manufacturing for Nokia from Hynix (Magna Chip) To ON Semiconductor Pocatello (ID).

PROPOSED FIRST SHIP DATE: 17-Jul-2011

AFFECTED CHANGE CATEGORY(S): ON Semiconductor Fab Site

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:
Contact your local ON Semiconductor Sales Office or Francis Lualhati <Francis.Lualhati@onsemi.com>

NOTIFICATION TYPE:

Initial Product/Process Change Notification (IPCN)

First change notification sent to customers. IPCNs are issued at least 120 days prior to implementation of the change. An IPCN is advance notification about an upcoming change and contains general information regarding the change details and devices affected. It also contains the preliminary reliability qualification plan.

The completed qualification and characterization data will be included in the Final Product/Process Change Notification (FPCN).

This IPCN notification will be followed by a Final Product/Process Change Notification (FPCN) at least 90 days prior to implementation of the change.

DESCRIPTION AND PURPOSE:

2Q 2010 - ON Semiconductor (Nasdaq: ONNN), announced plans, during an Engineering/Marketing presentation, to transfer fabrication operations for phosphorous and thick phosphorous zener EMI filter products and diode zener ESD protection device products from Hynix (Magna Chip) located in Seoul, South Korea, to the production lines in other company-owned facilities. The targeted close date is Q3 2011.

Description of the change:

The transfer and qualification of the Phosphorous Zener, Thick Phosphorous Zener, and Diode Zener processes and the associated integrated circuits from the Hynix (Magna Chip) facility (South Korea) to the Fab 10 wafer fabrication site located in the Pocatello, Idaho.

The Fab 10 Pocatello site is certified according to ISO9001:2008, 14001:2004, ISO/TS 16949:2009 and AS 9100B standards as well as MIL_PRF-38535, CTPAT and STACK.

The Phosphorous Zener, Thick Phosphorous Zener, and Diode Zener processes use bipolar silicon technology being replicated at Pocatello Fab 10 to get the same electrical and reliability performances as the Hynix (Magna Chip) wafer fab.

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The integrated circuits design and electrical specifications will remain identical.
A full electrical characterization over the temperature range will be performed for each product to check the device functionality and electrical specifications.

Qualification tests which are scheduled are designed to show that the reliability of transferred devices will continue to meet or exceed ON Semiconductor standards.

The Phosphorous Zener, Thick Phosphorous Zener, and Diode Zener processes are expected to be internally qualified at Pocatello Fab 10 by end of 2Q2011 and all the products by end of 3Q2011. Samples will be available from March 2011.

Product Qualification Vehicles

The product qualification vehicles should represent the broadest use of possible design library elements and available process modules.
Reliability testing is being performed on qualification vehicles chosen based on die size, voltage rating, and run rates. The following qualification vehicles were selected for this qualification.

CM6317	Thick Phosphorous Zener
CM6400A	Thick Phosphorous Zener (1 Poly/2 Metal)
CM6100	Diode/Zener

In addition to full reliability evaluation of the process qualification vehicles above, each of the device types to be transferred is being characterized to the following requirements:

Three temperature electrical characterization
ESD testing Human Body Model and Machine Model
RF Attenuation
Dynamic Resistance (if appropriate)
Surge Capability (if appropriate)

CHANGED PART IDENTIFICATION
There will be no changes to standard device markings. Normal assembly lots traceability codes will identify the wafer fab source.

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List of affected General Parts:

PART
CM6317
CM6320
CM6100
CM6400A
CM6407