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**FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #16441E**Generic Copy

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**Issue Date:** 08-May-2013**TITLE:** NCP1421/NCP1422 Qualification at Gresham Wafer Fab**PROPOSED FIRST SHIP DATE:** 08-Aug-2013**AFFECTED CHANGE CATEGORY(S):** Wafer Fab Location**FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:**Contact your local ON Semiconductor Sales Office or [Todd.Manes@onsemi.com](mailto:Todd.Manes@onsemi.com)**SAMPLES:**Contact your local ON Semiconductor Sales Office or [Mathew.Hilton@onsemi.com](mailto:Mathew.Hilton@onsemi.com)**ADDITIONAL RELIABILITY DATA:**Contact your local ON Semiconductor Sales Office or [Edmond.Gallard@onsemi.com](mailto:Edmond.Gallard@onsemi.com)**NOTIFICATION TYPE:**

Final Product/Process Change Notification (FPCN)

Final change notification sent to customers. FPCNs are issued at least 90 days prior to implementation of the change.

ON Semiconductor will consider this change approved unless specific conditions of acceptance are provided in writing within 30 days of receipt of this notice. To do so, contact <[quality@onsemi.com](mailto:quality@onsemi.com)>.

**DESCRIPTION AND PURPOSE:**

ON Semiconductor is pleased to announce a wafer fab transfer qualification for the NCP1421/NCP1422.

The NCP1421/NCP1422 is currently produced at ON Semiconductor's Aizu wafer fab facility located in Aizu, Japan. Due to the announcement of the Aizu fab closure, this device family will be produced from ON Semiconductor's Gresham wafer fabrication facility located in Gresham, Oregon. Upon expiration (or approval) of this Final PCN, devices may be supplied by either wafer fab.

The Gresham wafer fab is compliant to ISO9001:2008, ISO/TS16949:2009, and ISO14001:2004. The NCP1421/NCP1422 currently runs on the Aizu ACMOS2 process. The same ACMOS2 process has been transferred to and successfully qualified at the Gresham wafer fab. No device design changes have been made. Device performance is the same for Aizu and Gresham-sourced devices.

The NCP1421/NCP1422 will continue to be assembled and tested in existing, qualified locations. No changes to packaging will occur as a result of this fab qualification.



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**RELIABILITY DATA SUMMARY:**

**Platform Reliability Test Results:**

The Gresham-sourced NCP1421/NCP1422 family has been qualified based on the successful platform qual of the AC MOS2 technology in Gresham with qual vehicles: NCP303, NCP5208, and NCV8560.

<b><u>Test</u></b>	<b><u>Conditions</u></b>	<b><u>Results</u></b>
High Temp Op Life NCP303 NCP5208 NCV8560	Ta=125C, 1008 hours	0/80 (1 lot) 0/80 (3 lots) 0/84 (1 lot)
Early Life Failure Rate NCP303 NCP5208 NCV8560	Ta=125C, 48 hours	0/800 (1 lot) 0/800 (1 lot) 0/810 (1 lot)
Highly Accelerated Stress NCP303 NCP5208 NCV8560	Ta=130C, RH=85%, 96 hours w/MSL1 pre-conditioning	0/84 (1 lot) 0/80 (3 lots) 0/84 (1 lot)
Unbiased Highly Accel Stress NCP303 NCP5208 NCV8560	Ta=131C, RH=85%, 96 hours w/MSL1 pre-conditioning	0/84 (1 lot) 0/80 (3 lots) 0/84 (1 lot)
Temperature Cycle NCP303 NCP5208 NCV8560	-65C to +150C, 500 cycles  1000 cycles 1000 cycles	0/84 (1 lot) 0/80 (3 lots) 0/84 (1 lot)
Scan. Acoustical Tomography NCP303 NCP5208 NCV8560	MSL1	0/5 (1 lot) 0/5 (3 lots) 0/5 (1 lot)
High Temp Storage Life NCP303	Ta=150C, 1008 hours	0/80
Electrostatic Discharge NCP303 NCP5208 NCV8560	Human Body Model	Pass 3500V Pass 1000V Pass 4000V
Electrostatic Discharge NCP303 NCP5208 NCV8560	Machine Model	Pass 200V Pass 50V Pass 200V
Latch Up NCP303 NCP5208 NCV8560	JEDEC JESD78	Pass Pass Pass

**FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #16441E****NCP1421 Reliability Test Results:**

The Gresham-sourced NCP1421 device has had the following reliability tests performed.

Electrostatic Discharge NCP1421	Human Body Model	Pass 2000V except OUT pin which passes up to 1kV
Electrostatic Discharge NCP1421	Machine Model	Pass 200V except OUT pin which passes up to 1kV
Latch Up NCP1421	JEDEC JESD78	Pass

**ELECTRICAL CHARACTERISTIC SUMMARY:**

Electrical characterization test data has been obtained on Gresham NCP1421 material. No significant changes in part performance as compared to the existing Aizu-sourced product were observed. Cpk's of all critical parameters are greater than 1.67. Data may be provided upon request.

**CHANGED PART IDENTIFICATION:**

Devices with date codes of 2013 work week 31 or later may be sourced from either Gresham or Aizu fabs.

**List of affected General Parts:**

NCP1421DMR2G  
NCP1422MNR2G