



FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #20097Generic Copy

Issue Date: 20-Jun-2013**TITLE:** NCS2001 Device Families Qualification at Gresham Wafer Fab**PROPOSED FIRST SHIP DATE:** 20-Sep-2013**AFFECTED CHANGE CATEGORY(S):** Wafer Fab Location**FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:**Contact your local ON Semiconductor Sales Office or Shannon.Riggs@onsemi.com**SAMPLES:** Contact your local ON Semiconductor Sales Office or Shirley.Chang@onsemi.com**ADDITIONAL RELIABILITY DATA:** AvailableContact your local ON Semiconductor Sales Office or ken.fergus@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>.**DESCRIPTION AND PURPOSE:**

ON Semiconductor is pleased to announce a capacity expansion qualification for the NCS2001 devices.

This device family is currently qualified at ON Semiconductor's Aizu wafer fab facility located in Aizu, Japan and are now qualified at 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 NCS2001 devices currently run on the Aizu AC MOS2 process. The same AC MOS2 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 NCS2001 devices 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 NCS2001 family has been qualified based on the successful platform qual of the ACMOS2 technology in Gresham with qual vehicles: NCP303, NCP5208, and NCV8560.

Test	Conditions	Results
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



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ELECTRICAL CHARACTERISTIC SUMMARY:

Electrical characterization test data has been obtained on Gresham NCS2001 material. No significant changes in part performance as compared to the existing Aizu-sourced product were observed. Data may be provided upon request.

HBM for NCS2001 is now 1500V.

CHANGED PART IDENTIFICATION:

Devices with date codes of 2013 work week 34 or later may be sourced from either wafer Gresham or Aizu fab.

List of affected General Parts:

NCS2001SN1T1G
NCS2001SN2T1G
NCS2001SQ1T2G
NCS2001SQ2T2G
NCV2001SN2T1G
NCV2001SQ2T2G