



FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #20080Generic Copy

Issue Date: 30-Apr-2013**TITLE:** NCP1400 Qualification at Gresham Wafer Fab**PROPOSED FIRST SHIP DATE:** 30-Jul-2013**AFFECTED CHANGE CATEGORY(S):** Wafer Fab Location**FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:**

Contact your local ON Semiconductor Sales Office or <Mathew.Hilton@onsemi.com>

SAMPLES: Contact your local ON Semiconductor Sales Office**ADDITIONAL RELIABILITY DATA:** Available

Contact your local ON Semiconductor Sales Office or <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>.

DESCRIPTION AND PURPOSE:

ON Semiconductor is pleased to announce a wafer fab transfer qualification for the NCP1400 family.

The NCP1400 family 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 NCP1400 family currently runs on the Aizu CMOS1 process. The same CMOS1 process has been transferred to and successfully qualified at the Gresham wafer fab. No device design changes have been made.

The NCP1400 family 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 NCP1400 family has been qualified based on the successful platform qual of the AC MOS1 technology in Gresham with qual vehicles: NCP305, NCP551, NCP2860, and NCS2002.

| Test | Conditions | Results |
|--|---|---|
| High Temp Op Life NCP304 NCP551 NCP2860 NCS2002 | Ta=+125C, 1008 hours | 0/80 (1 lot) 0/80 (1 lot) 0/80 (3 lots) 0/80 (1 lot) |
| Early Life Failure Rate NCP304 NCP551 NCS2002 | Ta=+125C, 48 hours | 0/800 (1 lot) 0/800 (1 lot) 0/800 (1 lot) |
| Highly Accelerated Stress NCP304 NCP551 NCS2002 | Ta=131C/85% RH, 96 hours w/MSL1 pre-conditioning | 0/80 (1 lot) 0/80 (1 lot) 0/80 (1 lot) |
| Unbiased Highly Accel. Stress NCP304 NCP551 NCP2860 NCS2002 | Ta=131C/85% RH, 96 hours w/MSL1 pre-conditioning | 0/80 (1 lot) 0/80 (1 lot) 0/80 (3 lots) 0/80 (1 lot) |
| Temperature Cycle NCP304 NCP551 NCP2860 NCS2002 | -65C to +150C, 500 cycles | 0/80 (1 lot) 0/80 (1 lot) 0/80 (3 lots) 0/80 (1 lot) |
| Scan. Acoustical Tomography MSL1 NCP304 NCP551 NCP2860 NCS2002 | | 0/5 (1 lot) 0/5 (1 lot) 0/5 (3 lots) 0/5 (1 lot) |
| ESD | Human Body Model Machine Model | Pass 2000V (NCP304) Pass 200V (NCP304) |
| Latch Up | JEDEC JESD78 | Pass 500mA Pos / 170mA Neg (NCP305) |

**FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #20080****NCP1400 Reliability Test Results:**

The Gresham-sourced NCP1400 family has had the following reliability tests performed.

| Test | Conditions | Results |
|----------|-----------------------------------|-------------------------|
| Latch Up | JEDEC JESD78 | Pass +-150mA |
| ESD | Human Body Model Machine Model | Pass 2000V Pass 150V |

ELECTRICAL CHARACTERISTIC SUMMARY:

Electrical characterization has been completed on the Gresham NCP1400 material with no changes to the AC/DC specifications. The ESD device specification for machine model will change from 200V to 150V.

ON Semiconductor recommends samples be obtained for application specific review. Data is available upon request.

CHANGED PART IDENTIFICATION:

Devices with date codes of 2013 work week 31 or later may be sourced from either wafer fab.

List of affected General Parts:

NCP1400ASN19T1G
NCP1400ASN22T1G
NCP1400ASN25T1G
NCP1400ASN27T1G
NCP1400ASN30T1G
NCP1400ASN33T1G
NCP1400ASN38T1G
NCP1400ASN45T1G
NCP1400ASN50T1G