



---

**FINAL PRODUCT/PROCESS CHANGE NOTIFICATION**

Generic Copy

---

**06-APR-2005**

**SUBJECT: ON Semiconductor Final Product/Process Change Notification #14053**

**TITLE: Qualification of XFAB Texas Wafer Fab for NCP4894, NCP4896  
MICRO-BUMPED Devices**

**EFFECTIVE DATE: 06-Jun-2005**

**AFFECTED CHANGE CATEGORY(S): Subcontractor Fab Site**

**AFFECTED PRODUCT DIVISION(S): Analog Products**

**ADDITIONAL RELIABILITY DATA:** Available

Contact your local ON Semiconductor Sales Office or Edmond Gallard <TT0015@onsemi.com>

**SAMPLES:** Contact your local ON Semiconductor Sales Office or  
Todd Manes <RP06650@onsemi.com>

**FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:**

Contact your local ON Semiconductor Sales Office or Todd Manes <RP06650@onsemi.com>

**NOTIFICATION TYPE:**

Final Product/Process Change Notification (FPCN)

Final change notification sent to customers. FPCNs are issued at least 60 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 your local ON Semiconductor Sales Office.

**DESCRIPTION AND PURPOSE:**

This is a Final PCN (Product Change Notice) to notify customers of the qualification of the XFAB Texas wafer fab, located in Lubbock, Texas, as an additional source for the NCP4894 and NCP4896 micro-bumped devices. The devices are currently run in the XFAB Germany facility, located in Erfurt, Germany. Both XFAB locations offer the same process technology; therefore, no die design changes were made.

An initial PCN (#13554) was published in July, 2004. This initial PCN provided information regarding the plan to qualify XFAB Texas to run this device.

XFAB Texas is certified: ISO9001:2000, ISO TS 16949; VDA 6.1; QS9000.

**Final Product/Process Change Notification #14053**

The NCP4894 and NCP4896 micro-bumped devices will continue to be assembled and tested at existing, qualified locations. XFAB offers the same process technology in both fab locations; therefore, no die design changes were made. The NCP4894 and NCP4896 micro-bumped devices have been fully qualified and are now ready to run at the XFAB Texas wafer fab. No change in device functionality or in electrical test parameter distributions have been noted.

Samples are available upon request. At the expiration of this PCN (60 days), fabrication of the NCP4894 and NCP4896 micro-bumped devices may occur at either XFAB site.

**RELIABILITY DATA SUMMARY:**

XFAB process reliability has been fully qualified for both the Germany and Texas facilities on previous qual vehicles, including the NCP2890A micro-bumped device. Micro-bump packaging for XFAB-processed wafers has also been fully qualified on multiple devices, including NCP2890A, NCP4894, and NCP4896. Reliability testing for the NCP4894 & NCP4896 XFAB Texas facility included Electrical Distribution (characterization) on one lot of each device type over the full temperature range, Electrostatic Discharge (ESD) testing on one lot of each device type, and Latch Up testing on one lot of each device type.

Electrical Distribution (Characterization) data is summarized in the following section (below).

Electrostatic Discharge (ESD) and Latch Up Results:

1. NCP4894FCT1G:
  - ESD Model/Voltage: HBM/2000V
  - Sample Size = 5 units
  - Number of Rejects = 0
  - Qual Result: PASS
  - ESD Model/Voltage: MM/200V
  - Sample Size = 5 units
  - Number of Rejects = 0
  - Qual Result: PASS
  - Latch Up (>100mA)
  - Sample Size = 6 units
  - Number of Rejects = 0
  - Qual Result: PASS
2. NCP4896FCT1G:
  - ESD Model/Voltage: HBM/2000V
  - Sample Size = 5 units
  - Number of Rejects = 0
  - Qual Result: PASS
  - ESD Model/Voltage: MM/200V
  - Sample Size = 5 units
  - Number of Rejects = 0
  - Qual Result: PASS
  - Latch Up (>100mA)
  - Sample Size = 6 units
  - Number of Rejects = 0
  - Qual Result: PASS

**Final Product/Process Change Notification #14053****ELECTRICAL CHARACTERISTIC SUMMARY:**

Electrical test characterization was performed on one lot (sample size = 30 units) of each device type processed at XFAB Texas. The results were compared to data for the same devices fabricated at the XFAB Germany wafer fab.

No changes in performance were observed.

A full characterization data report is available upon request.

**CHANGED PART IDENTIFICATION:**

Product with date codes of "0522" or later may be manufactured in XFAB Texas.

**AFFECTED DEVICE LIST (WITHOUT SPECIALS)**

NCP4894FCT1

NCP4894FCT1G

NCP4896FCT1G