



FINAL PRODUCT/PROCESS CHANGE NOTIFICATION

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10 Sep 2007

SUBJECT: ON Semiconductor Final Product/Process Change Notification #16045

TITLE: Qualification of Flip Chip International (FCI) for Bumped Products

PROPOSED FIRST SHIP DATE: 10 Dec 2007

AFFECTED CHANGE CATEGORY(S): Sub-Assembly

AFFECTED PRODUCT DIVISION(S): Low Voltage Power Management

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:

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

SAMPLES:

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

ADDITIONAL RELIABILITY DATA: Available

Contact your local ON Semiconductor Sales Office or Edmond Gallard <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 your local ON Semiconductor Sales Office.

DESCRIPTION AND PURPOSE:

This is a Final PCN announcing that ON Semiconductor has successfully qualified the Flip Chip International (FCI) facility in Phoenix, Arizona as an additional source for bump processing of micro-bump devices including NCP2820FCT1G, NCP2820FCT2G, and NCP2990FCT2G.

FCI is a fully certified ISO9002 and QS9000 supplier.

There will be no changes in the wafer/die source; therefore, device functionality will be identical to that of the existing production material. Device parameters will continue to meet all Data Book specifications, and reliability will continue to meet or exceed ON Semiconductor standards.



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RELIABILITY DATA SUMMARY:

The FCI Phoenix, Arizona facility has previously been qualified for bump processing of ON Semiconductor products, including NCP2890AFCT2G, NUF4105FCT1G, and others. The original qualification of FCI as a supplier of micro-bump products was announced in FPCN #15016, issued in October, 2005.

The original qualification of FCI was based upon successful completion of reliability testing as indicated below.

Since the original qualification was announced, additional Temperature Cycle data has been gathered as part of ON Semiconductor's ongoing reliability audit program. The results of that additional testing are summarized below as well.

Because the NCP2820FCT1G, NCP2820FCT2G, and NCP2990FCT2G share the same case outline, with the same die size, number of I/O's, bump array, and bump pitch as the previously-qualified NCP2890AFCT2G, they are qualified by similarity to that device.

Electrical Characterization data is currently being gathered for NCP2820 and NCP2990 devices bumped at FCI and will be made available for customer review if requested.

Reliability Test Results:

ORIGINAL Qualification

Test	Conditions	Results
Temperature Cycle	TA = -40C to +125C	NCP2890AFCT2G Lot A 0/90 NCP2890AFCT2G Lot B 0/90 NCP2890AFCT2G Lot C 0/90 NCP2890AFCT2 Lot A 0/90 NCP2890AFCT2 Lot B 0/90 NUF4105FCT1 Lot A 0/90 NUF6105FCT1 Lot A 0/90 NUF6106FCT1 Lot A 0/90
Ball Shear	In-line Monitoring	NCP2890AFCT2G Lot A 0/5 NCP2890AFCT2 Lot A 0/5 NUF4105FCT1 Lot A 0/5 NUF6105FCT1 Lot A 0/5 NUF6106FCT1 Lot A 0/5

ADDITIONAL Reliability Monitor Data

Temperature Cycle	TA = -40C to +125C	NCP2890AFCT2G Lot 1 0/80 NCP2890AFCT2G Lot 2 0/80 NCP2890AFCT2G Lot 3 0/80 NCP2890AFCT2G Lot 4 0/80 NCP2890AFCT2G Lot 5 0/80
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ELECTRICAL CHARACTERISTIC SUMMARY:

Temperature characterization for affected devices is currently being gathered and will be made available upon customer request.

**Final Product/Process Change Notification #16045****CHANGED PART IDENTIFICATION:**

Devices are marked with 2 lines of marking. The first character of the 2nd line indicates the bump factory. Devices bumped at FCI will be marked with the 2nd line first character = "F". Devices bumped at the existing qualified factory (ASE) will continue to be marked with the letter "Z" in this location:

Device Marking:

Line 1: XXX where XXX = device-specific code as indicated on the product Data Sheet

Line 2: bYWW where

b = "Z" for ASE-bumped products

"F" for FCI-bumped products

YWW = Year & Work Week

AFFECTED DEVICE LIST

NCP2820FCT1G

NCP2820FCT2G

NCP2990FCT2G