



FINAL PRODUCT/PROCESS CHANGE NOTIFICATION

Generic Copy

13-Oct-2008

SUBJECT: ON Semiconductor Final Product/Process Change Notification #16166

TITLE: Final PCN for Qualification of NCP1586 Low Voltage Synchronous Buck Controller in ON Semiconductor facility in Carmona, Philippines

PROPOSED FIRST SHIP DATE: 13-Jan-2009

AFFECTED CHANGE CATEGORY(S): ON Semiconductor Assembly Site

AFFECTED PRODUCT DIVISION(S): PQ (Power Switching Devices) under Computing Products Group

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:

Contact your local ON Semiconductor Sales Office or Wyler Montoya <Wyler.Montoya@onsemi.com>

SAMPLES: Contact your local ON Semiconductor Sales Office

ADDITIONAL RELIABILITY DATA: Available

Contact your local ON Semiconductor Sales Office or Wyler Montoya <Wyler.Montoya@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:

ON Semiconductor is pleased to announce that the NCP1586 Low Voltage Synchronous Buck Controller Device built on SOIC8 narrow body are qualified to be assembled in ON Semiconductor facility in Carmona, Philippines.

The devices listed under the "Affected Device List" can be assembled in ON Semiconductor facility in Carmona, Philippines or the current qualified assembly site, UNISEM (located in Indonesia) upon the expiration of the FPCN.

There will be no changes in device functionality, electrical specifications, BOM, case outline, or footprint. Reliability will continue to meet or exceed ON Semiconductor's highest standards.

**Final Product/Process Change Notification #16166****RELIABILITY DATA SUMMARY:**

The SOIC-8 NB is a qualified package in OSPI. The generic package reliability data from SOIC-8 NB qual vehicle with the same BOM (except leadframe), will qualify the NCP1586 to exclude the package related reliability tests (qualification by similarity). The largest standard SOIC-8 LF flag size qualified in OSPI is only 90x120mil. Therefore, MSL evaluation is required to qualify the new standard SOIC-8 95x130mil LF and electrical characterization will perform to verify the NCP1586 still meet the Cpk requirement in the SOIC-8 NB package in OSPI.

Reliability Test Results (NCP1586DR2G - ON Semiconductor Carmona):

| Test | Conditions | Readoint | Results |
|------------------------------------|--|----------|---------|
| Scanning Acoustic Tomography (SAT) | MSL1 @260°C Compare Pre & Post PC for delamination | Post PC | 0/10 |

Generic Reliability Data (NTMS10P02R2G)

| Test | Conditions | Readpoint | Results |
|---|---|-----------|---------|
| Preconditioning (PC) | MSL1 @260°C | Post PC | 0/231 |
| Scanning Acoustic Tomography (SAT) | Compare Pre & Post PC for delamination | Post PC | 0/15 |
| Autoclave (AC-PC) | Ta=121°C, RH=100% PSIG=15 | 96hrs | 0/231 |
| Temp. Cycle (TC-PC) | -65°C to 150°C | 500cycs | 0/231 |
| Highly Accelerated Stress Test (HAST-PC) | Ta=131°C, RH=85% PSIG=18.8 | 96hrs | 0/231 |
| Resistance to Solder Heat (RSH) | 260°C Immersion | | 0/30 |

ELECTRICAL CHARACTERISTIC SUMMARY:

All products' performance meets current datasheet specifications.

CHANGED PART IDENTIFICATION:

All devices processed at the new OSPI location will have the location code "P" as part of the device traceability code.



Final Product/Process Change Notification #16166

AFFECTED DEVICE LIST

NCP1586DR2G
NCP1586DR2GH