



INITIAL PRODUCT/PROCESS CHANGE NOTIFICATION
Generic Copy

16-DEC-2003

SUBJECT: ON Semiconductor Initial Product/Process Change Notification #13270

TITLE: Initial PCN for Qualification of QFN (QUAD FLAT NO-LEAD) (2X2.2MM to 8X8MM, 6 to 52LD) at NSEB

EFFECTIVE DATE: 16-Apr-2004

AFFECTED CHANGE CATEGORY: Subcontractor Assembly Site

AFFECTED PRODUCT DIVISION:

Power Products
Analog Products
Discretes Products
Logic Products
Ecl Products

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:

Contact Sales Representative or Shannon Riggs <R13350@onsemi.com>

NOTIFICATION TYPE:

Initial Product/Process Change Notification (IPCEN)

First change notification sent to customers. IPCNs are issued at least 120 days prior to implementation of the change. An IPCN is advance notification about an upcoming change and contains general information regarding the change details and devices affected. It also contains the preliminary reliability qualification plan.

The completed qualification and characterization data will be included in the Final Product/Process Change Notification (FPCN).

This IPCN notification will be followed by a Final Product/Process Change Notification (FPCN) at least 60 days prior to implementation of the change.

DESCRIPTION AND PURPOSE:

This is an Initial Product Change Notice to make customers aware that NS Electronics (NSEB), located in Bangkok, Thailand is being qualified as a supplemental manufacturing source for ON Semiconductor's QFN(Quad Flat No-Lead) packages. NSEB will provide QFN packages from 2x2.2mm to 8x8mm for Analog, Logic, Discrete, TMOS, and High Frequency products. Testing of these products will be performed by ON Semiconductor in the Carmona, Philippines and Seremban, Malaysia facility.

NSEB has been building QFN packages for 2 years. NSEB is certified to QS9000, ISO9002, ISO14001 and SAC Level 1. The affected QFN packages are being qualified to run specific devices that are currently processed in ASAT, Hong Kong. This is not a transfer but a capacity expansion.



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ON Semiconductor plans to publish the final PCN for this activity in February/March, 2004. After, expiration of the final PCN, the devices listed below may be processed at either manufacturing location.

QUALIFICATION PLAN:

NSEB QFN Qualification Plan/Test Vehicles

| Package Family | Qual Vehicle | Tests |
|----------------------|--------------|------------------------|
| 3x3 mm 16LD | NLSF1174MNR2 | PC/HTOL/TC/AC/HAST/HTB |
| 5x6 mm 18LD | NCP5201 | PC/TC/AC/HTB |
| 7x7 mm 48LD Analog | NCP5316 | PC/HTOL/TC/AC/HAST/HTB |
| 8x8 mm 52LD | NB100LVEP221 | PC/TC/AC/HTB |
| 4x4 mm 24LD | NB100LVEP17 | PC/TC/AC/HTB |
| 3.3x3.3PowerPak TMOS | NLTLD7900 | PC/HTOL/TC/AC/HAST/HTB |
| 2x2.2mm 6LD Analog | NCS2200SQLT1 | PC/HTOL/TC/AC/HAST/HTB |

| TEST | NAME | CONDITIONS | SS/#Lots |
|---------|-----------------|-----------------------------|--------------|
| HTOL | HighTempOpLife | TJ =150DegC,504 hours | 80 x 3 lots |
| HTB | High Temp Bake | 150DegC,1008 hours | 80 x 3 lots |
| PC | MSL1 Precond | IR at 260DegC (TC/HAST/AC) | 250 x 3 lots |
| PC-HAST | PC-HAST | 131DegC/80%RH, 96 Hrs | 80 x 3 lots |
| PC-AC | PC-Autoclave | 121DegC/100%RH/15PSIG,96hrs | 80 x 3 lots |
| PC-TC | PC-Temp Cycling | -65DegC to +150DegC;500 cyc | 90 x 3 lots |

AFFECTED DEVICE LIST (WITHOUT SPECIALS):

PART

- NB100LVEP17MN
- NB100LVEP17MNR2
- NB100LVEP56MN
- NB100LVEP56MNR2
- NB100LVEP91MN
- NB100LVEP91MNR2
- NBSG11MN
- NBSG11MNR2
- NBSG14MN
- NBSG14MNR2
- NBSG16MN
- NBSG16MNR2
- NBSG16VSMN
- NBSG16VSMNR2
- NBSG53AMN
- NBSG53AMNR2
- NBSG72AMN
- NBSG72AMNR2
- NBSG86AMN
- NBSG86AMNR2
- NCP1421MNR2
- NCP500SQL18T1
- NCP500SQL25T1
- NCP500SQL27T1
- NCP500SQL28T1
- NCP500SQL30T1
- NCP500SQL33T1



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NCP500SQL50T1
NCP5201MN
NCP5201MNR2
NCP5203MNR2
NCP5314MNR2
NCP5316MNR2
NCS2200SQLT1
NCS5021MN
NCS5021MNR2
NLA44599MN
NLA44599MNR2
NLA4684MNR2
NLA4685MNR2
NLA44599MN
NLA44599MNR2
NLSF1174MNR2
NLSF302MNR2
NLSF308MNR2
NLSF3T125MNR2
NLSF3T126MNR2
NLSF595MNR2
NTLTD7900ZR2
NTLTD7900ZR2G
PB6L239MN
PB6L239SMN
PB7L1653MN
PBLVEP16VRMN
PBSG017MMN
PBSG113MN
PCP5209MN
PCP5210MN
SBSG113MN
SBSG113MNR2
UT5351MNR2
XCS2200SQLT1