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**INITIAL PRODUCT/PROCESS CHANGE NOTIFICATION**  
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**21-JAN-2004**

**SUBJECT: ON Semiconductor Initial Product/Process Change Notification #13296**

**TITLE: Initial PCN for Qualification of QFN (2X2.2MM to 8X8MM, 6 to 52LD) at ON Seremban**

**EFFECTIVE DATE: 21-May-2004**

**AFFECTED CHANGE CATEGORY: ON Semiconductor Assembly/Test 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 (IPCN)

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 the ON Semiconductor facility in Seremban, Malaysia is being qualified as a manufacturing source for the ON QFN packages. On Semiconductor, Seremban 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.

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.

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



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**QUALIFICATION PLAN:**

**SBN QFN Qualification Plan Qualification Test Vehicles**

<b>Product Family</b>	<b>Qual Vehicle</b>	<b>Tests</b>
3x3mm 16ld	NLSF1174MNR2	PC/HTOL/TC/AC/HAST/HTB
5x6mm 18ld	NCP5201	PC/TC/AC/HTB
7x7mm 48ld Analog	NCP5316	PC/HTOL/TC/AC/HAST/HTB
8x8mm 52ld	NB100LVEP221	PC/TC/AC/HTB
4x4mm 24ld	NB100LVEP17	PC/TC/AC/HTB
3.3x3.3 PwrPak TMOS	NLTLD7900	PC/HTOL/TC/AC/HAST/HTB
2x2.2mm 6ld Analog	NCS2200SQLT1	PC/HTOL/TC/AC/HAST/HTB

<b>TEST NAME</b>	<b>TEST CONDITIONS</b>	<b>SSx# Lots</b>
HTOL High Temp Op Life	TJ =150DegC, 504 hrs	80x3 lots
HTB High Temp Bake	150DegC, 1008 hrs	80x3 lots
PC MSL1or2 Precond	IR at 260DegC, prior to TC, HAST, AC	250x3 lots
PC-HAST	131DegC/80%RH,96Hrs, Cycled bias	80x3 lots
PC-AC PC-Autoclave	121DegC/100%RH/15PSIG,96hrs	80x3 lots
PC-TC PC-TempCycle	-65to+150DegC;500 cycles	90 x 3 lots

Reliability qualification plan will include SAT imaging after MSL PC.  
 (standard BOM at 235C and green BOM at 260C reflow must show no signs of delamination)

**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



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NCP500SQL33T1  
NCP500SQL50T1  
NCP5201MN  
NCP5201MNR2  
NCP5203MNR2  
NCP5314MNR2  
NCP5316MNR2  
NCS2200SQLT1  
NCS5021MN  
NCS5021MNR2  
NLA544599MN  
NLA544599MNR2  
NLA54684MNR2  
NLA54685MNR2  
NLA544599MN  
NLA544599MNR2  
NLSF1174MNR2  
NLSF302MNR2  
NLSF308MNR2  
NLSF3T125MNR2  
NLSF3T126MNR2  
NLSF595MNR2  
NTLTD7900ZR2  
NTLTD7900ZR2G  
PB6L239MN  
PB6L239SMN  
PB7L1653MN  
PBG017MMN  
PCP5209MN  
PCP5210MN  
SBSG113MN  
UT5351MNR2  
XCS2200SQLT1