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**INITIAL PRODUCT/PROCESS CHANGE NOTIFICATION**  
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**22-OCT-2004**

**SUBJECT: ON Semiconductor Initial Product/Process Change Notification #13716**

**TITLE: Initial PCN for Qualification of QFN (2X2.2MM TO 8X8MM, 6 TO 52-LD) at ASAT China**

**EFFECTIVE DATE: 25-Feb-2005**

**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 Karen Oppen <FFBXP@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 the ASAT facility in Chang-an, Dongguan, China is being qualified as a manufacturing source for the ON QFN packages. ASAT China will provide QFN packages from 2x2.2mm to 8x8mm for Analog Power Management, Standard Components, and Integrated Power products. ASAT China is a ISO-9001 certified factory.



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**QUALIFICATION PLAN:**

**ASAT China QFN Qualification Plan Test Vehicles**

Product Family	Qual Vehicle	Tests
8x8 mm, 52 lead	NB100LVEP221	Pre-conditioning/SAT analysis
7x7 mm, 48 ld	NCP5316	Pre-conditioning/SAT analysis
5x6 mm, 18 ld	NCP5201/ 5210	PC/AC/TC
4x4 mm, 24 ld	NB100LVEP17	Pre-conditioning/SAT analysis
2x2.2 mm, 6 lead	NCS2200SQLT1	Pre-conditioning/SAT analysis
3.3x3.3 PowerPak TMOS	NLTLD7900	PC/AC/TC
3x3 mm, 16 lead	NLSF1174MNR2	Pre-conditioning/SAT analysis
3x3 10 DQFN	NCP1422	Pre-conditioning/SAT analysis

TEST NAME	TEST CONDITIONS	SS x # Lots
PC MSL1,2,or 3 Precond	IR at 235DegC, prior to TC, AC	170 x 3 lots
PC-Autoclave	121C/100% RH/15 PSIG for 96 hours	80 x 3 lots
PC-Temp Cycling	-65C to +150C; for 500 cycles	90 x 3 lots

Reliability qualification plan will include SAT imaging after MSL  
PC. Standard BOM at 235C reflow 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  
 NBSG11MNG  
 NBSG11MNR2  
 NBSG11MNR2G  
 NBSG14MN  
 NBSG14MNG  
 NBSG14MNR2  
 NBSG16MMN  
 NBSG16MMNG  
 NBSG16MMNR2  
 NBSG16MN  
 NBSG16MNG  
 NBSG16MNR2  
 NBSG16VSMN  
 NBSG16VSMNG  
 NBSG16VSMNR2  
 NBSG53AMN  
 NBSG53AMNG  
 NBSG53AMNR2  
 NBSG72AMN  
 NBSG72AMNG

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NBSG72AMNR2  
NBSG86AMN  
NBSG86AMNG  
NBSG86AMNR2  
NCP1422MNR2  
NCP1422MNR2G  
NCP500SQL18T1  
NCP500SQL25T1  
NCP500SQL27T1  
NCP500SQL28T1  
NCP500SQL30T1  
NCP500SQL33T1  
NCP500SQL50T1  
NCP5201MN  
NCP5201MNR2  
NCP5201MNR2G  
NCP5203MNR2  
NCP5210MNR2  
NCP5220MNR2  
NCP5220MNR2G  
NCS2200SQLT1  
NCS5021MN  
NCS5021MNR2  
NLAS44599MN  
NLAS44599MNR2  
NLAS44599MNR2G  
NLAS4684MNR2  
NLAS4684MNR2G  
NLAS4685MNR2  
NLAST44599MN  
NLAST44599MNG  
NLAST44599MNR2  
NLAST44599MNR2G  
NLSF1174MNR2  
NLSF302MNR2  
NLSF302MNR2G  
NLSF308MNR2  
NLSF308MNR2G  
NLSF3T125MNR2  
NLSF3T125MNR2G  
NLSF3T126MNR2  
NLSF595MNR2  
NLSF595MNR2G  
NTLTD7900ZR2  
NTLTD7900ZR2G  
PB7L1653MN  
PCP5209MN  
SBSG113MN  
XCS2200SQLT1