ON Semiconductor

Final Product/Process Change Notification

Document # : FPCN21348X
Issue Date: 26 May 2016

Title of Change:	NCP81278MNTXG change in operation mode when PSI-pin is at mid-level voltage, implemented by test program change.
Proposed first ship date:	3 September 2016 or earlier upon customer approval
Contact information:	Contact your local ON Semiconductor Sales Office or <Joe.Chong@onsemi.com>
Samples:	Contact your local ON Semiconductor Sales Office or <Joe.Chong@onsemi.com>
Additional Reliability Data:	Contact your local ON Semiconductor Sales Office or <Tomas.Vajter@onsemi.com>.
Type of notification:	This is a Final Product/Process Change Notification (FPCN) sent to customers. FPCNs are normally issued 90 days prior to implementation of the change. **However, ON Semiconductor is requesting customer approval for immediate implementation of this change.** ON Semiconductor will consider this change accepted, unless an inquiry is made in writing within 30 days of delivery of this notice. To do so, contact <PCN.Support@onsemi.com>.
Change Part Identification:	Affected first lot will be identified with Datecode of week 18 of 2016. Datecode top marking is "GAER ".
Change category:	☐ Wafer Fab Change ☐ Assembly Change ☒ Test Change ☐ Other _____

Change Sub-Category(s):

☐ Manufacturing Site Change/Addition
☐ Manufacturing Process Change
☐ Material Change
☒ Product specific change
☒ Datasheet/Product Doc change
☐ Shipping/Packaging/Marking
☒ Other: Test Program Change

Sites Affected:

☐ All site(s) ☒ not applicable ☐ ON Semiconductor site(s) : ☐ External Foundry/Subcon site(s)

Description and Purpose:

This FPCN announces a change in the electrical function of the PSI pin, as defined by the datasheet Electrical Characteristics table and Table 1, shown below.

This is implemented by a change in the test program only. There is no change to the package, materials, or die/wafer fabrication.

After the change, when the PSI pin is at mid-level voltage, the NCP81278 will be in 1-phase forced CCM mode.
Before the change, when the PSI pin is at mid-level voltage, the NCP81278 would be in 2-phase CCM/DCM Auto transition mode.

Change **FROM**:

ELECTRICAL CHARACTERISTICS

POWER SAVE INPUT

Characteristics	Test Condition	Symbol	Min	Typ	Max	Units
Connected to PVCC	PSH: 2−Phase Auto CCM/DCM Mode		V_{PVCC} − 0.25			V
High Threshold	PS0: 2−Phase FCCM Mode	$V_{highPSI}$	1.5			V
Mid Voltage level	PS1: 2−Phase Auto CCM/DCM Mode	V_{midPSI}	0.6		1.2	V
Low Threshold	PS2: 1−Phase Auto CCM/DCM Mode	V_{lowPSI}			0.3	V

Table 1. POWER SAVING INTERFACE (PSI) CONFIGURATIONS

PSI Level	Power Mode	Phase Configuration
Connected to PVCC	PSH	2−Phase, Auto CCM/DCM
High	PS0	2−Phase, FCCM
Intermediate	PS1	2−Phase, Auto CCM/DCM
Low	PS2	1−Phase, Auto CCM/DCM

Change **TO**:

ELECTRICAL CHARACTERISTICS

POWER SAVE INPUT

Characteristics	Test Condition	Symbol	Min	Typ	Max	Units
Connected to PVCC	PSH: 2−Phase Auto CCM/DCM Mode		V_{PVCC} − 0.25			V
High Threshold	PS0: 2−Phase FCCM Mode	$V_{highPSI}$	1.5			V
Mid Voltage level	PS1: 1−Phase CCM Mode	V_{midPSI}	0.6		1.2	V
Low Threshold	PS2: 1−Phase Auto CCM/DCM Mode	V_{lowPSI}			0.3	V

Table 1. POWER SAVING INTERFACE (PSI) CONFIGURATIONS

PSI Level	Power Mode	Phase Configuration
Connected to PVCC	PSH	2−Phase, Auto CCM/DCM
High	PS0	2−Phase, FCCM
Intermediate	PS1	1−Phase CCM
Low	PS2	1−Phase, Auto CCM/DCM

Reliability Data Summary:

N/A. No impact to reliability. Change is implemented by test program change only.

Electrical Characteristic Summary:

See above Description and Purpose section.

List of affected Standard Parts:

Part Number	Qualification Vehicle
NCP81278MNTXG	NCP81272MNTXG