



Final Product/Process Change Notification

Document #:FPCN23840XD1

Issue Date:29 Oct 2021

Title of Change:	FPCN Bump Site Transfer from FCI to ASE-KH
Proposed First Ship date:	05 Feb 2022 or earlier if approved by customer
Contact Information:	Contact your local onsemi Sales Office
PCN Samples Contact:	Contact your local onsemi Sales Office or < PCN.samples@onsemi.com >. Sample requests are to be submitted no later than 30 days from the date of first notification, Initial PCN or Final PCN, for this change. Samples delivery timing will be subject to request date, sample quantity and special customer packing/label requirements.
Additional Reliability Data:	Contact your local onsemi Sales Office or Rob.Travis@onsemi.com
Type of Notification:	This is a Final Product/Process Change Notification (FPCN) sent to customers. FPCNs are issued 90 days prior to implementation of the change. onsemi 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
Marking of Parts/ Traceability of Change:	Parts using the ASE-KH bump flow will be identified by a new plant code
Change Category:	Assembly Change, Bump Site Change
Change Sub-Category(s):	Manufacturing Site Transfer

Sites Affected:

onsemi Sites	External Foundry/Subcon Sites
None	ASEKH, Taiwan (Kaohsiung)
	Flipchip International, USA

Description and Purpose:

This Product Change Notification is to announce the Bump Site Transfer from FCI to ASE-KH.

	Before Change Description	After Change Description
Bump Site	Flipchip International, USA	ASEKH, Taiwan (Kaohsiung)
Structure	1P1M	1P1M
P1 Material	BCB or PBO(CRC-2348)	HD4000E
M1 Material	AlNiVCu or TiNiVCu or Cu	Cu
Solderball Material	SAC266 or SAC305	SAC405



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Reliability Data Summary:

QV DEVICE NAME : **NCP333FCT2G**

RMS : 74001, 79053 (*3 lots per test)

PACKAGE: WLCSP

Test	Specification	Condition	Interval	Results
HTOL	JESD22-A108	TA=125C, bias at 1.2X Nominal (not to exceed Max rated)	1008 hrs	0/231
HTSL	JESD22-A103	Ta= 150°C	1008 hrs	0/231
TC+PC	JESD22-A104	Temp = -40°C to +125°C; for 850 cycles	850 cyc	0/231
HAST+PC	JESD22-A110	Temp = 130C, 85% RH, ~ 18.8 psig, bias = 100% of rated V or 100V max	96 hrs	0/231
uHAST+PC	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/231
PC	J-STD-020 JESD-A113	IR reflow at 260C		0/693
SD	JSTD002B	Ta=245C 10 sec dwell B102		0/15
PD		per marketing outline drawing		0/60

QV DEVICE NAME : **NCP451AFCT2G**

RMS : 74110, 77722 (3 lots per test)

PACKAGE: WLCSP

Test	Specification	Condition	Interval	Results
HTOL	JESD22-A108	TA=125C, bias at 1.2X Nominal (not to exceed Max rated)	1008 hrs	0/231
HTSL	JESD22-A103	Ta= 150°C	1008 hrs	0/231
TC+PC	JESD22-A104	Temp = -40°C to +125°C; for 850 cycles	850 cyc	0/231
HAST+PC	JESD22-A110	Temp = 130C, 85% RH, ~ 18.8 psig, bias = 100% of rated V or 100V max	96 hrs	0/231
uHAST+PC	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/231
PC	J-STD-020 JESD-A113	IR reflow at 245C or 260C (pkg dependant)		0/693
SD	JSTD002B	Ta=245C 10 sec dwell B102		0/15
PD		per marketing outline drawing		0/60

Electrical Characteristics Summary:

Electrical characteristics are not impacted

List of Affected Parts:

Note: Only the standard (off the shelf) part numbers are listed in the parts list. Any custom parts affected by this PCN are shown in the customer specific PCN addendum in the PCN email notification, or on the [PCN Customized Portal](#).

Part Number	Qualification Vehicle
NCP451AFCT2G	NCP333FCT2G, NCP451AFCT2G
NCP435FCT2G	NCP333FCT2G, NCP451AFCT2G
NCP433FCT2G	NCP333FCT2G, NCP451AFCT2G
NCP339BFCT2G	NCP333FCT2G, NCP451AFCT2G



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NCP339AFCT2G	NCP333FCT2G, NCP451AFCT2G
NCP333FCT2G	NCP333FCT2G, NCP451AFCT2G
NCP335FCT2G	NCP333FCT2G, NCP451AFCT2G
NCP337FCT2G	NCP333FCT2G, NCP451AFCT2G
NCP459FCT2G	NCP333FCT2G, NCP451AFCT2G
NCP456RFCCT2G	NCP333FCT2G, NCP451AFCT2G
NCP451FCT2G	NCP333FCT2G, NCP451AFCT2G

Appendix A: Changed Products

**PCN#: FPCN23840XD1
Issue Date: Oct 28, 2021**

Product	Customer Part Number	Qualification Vehicle	New Part Number	Replacement Supplier
NCP451AFCT2G		NCP333FCT2G, NCP451AFCT2G	NA	
NCP435FCT2G		NCP333FCT2G, NCP451AFCT2G	NA	
NCP433FCT2G		NCP333FCT2G, NCP451AFCT2G	NA	
NCP339BFCT2G		NCP333FCT2G, NCP451AFCT2G	NA	
NCP339AFCT2G		NCP333FCT2G, NCP451AFCT2G	NA	
NCP333FCT2G		NCP333FCT2G, NCP451AFCT2G	NA	
NCP335FCT2G		NCP333FCT2G, NCP451AFCT2G	NA	
NCP337FCT2G		NCP333FCT2G, NCP451AFCT2G	NA	
NCP451FCT2G		NCP333FCT2G, NCP451AFCT2G	NA	