



## Final Product/Process Change Notification

Document #:FPCN23840XO

Issue Date:03 Nov 2021

<b>Title of Change:</b>	FPCN Bump Site Transfer from FCI to ASE-KH
<b>Proposed First Ship date:</b>	10 Feb 2022 or earlier if approved by customer
<b>Contact Information:</b>	Contact your local onsemi Sales Office
<b>PCN Samples Contact:</b>	Contact your local onsemi Sales Office or < <a href="mailto:PCN.samples@onsemi.com">PCN.samples@onsemi.com</a> >. 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.
<b>Additional Reliability Data:</b>	Contact your local onsemi Sales Office or <a href="mailto:Rob.Travis@onsemi.com">Rob.Travis@onsemi.com</a>
<b>Type of Notification:</b>	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 <a href="mailto:PCN.Support@onsemi.com">PCN.Support@onsemi.com</a>
<b>Marking of Parts/ Traceability of Change:</b>	Parts using the ASE-KH bump flow will be identified by a new plant code
<b>Change Category:</b>	Bump Site Change, Assembly Change
<b>Change Sub-Category(s):</b>	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 245C or 260C (pkg dependant)		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

QV DEVICE NAME : FPF3188AUCX

RMS : 55652, 67206, 68609 (\*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



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### 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
NCP398FCCT1G	FPF3188AUCX, NCP451AFCT2G, NCP333FCT2G