



Initial Product/Process Change Notification

Document #: IPCN23882X

Issue Date: 22 Mar 2021

Title of Change:	Qualification of Additional Bump and Backgrind Operation in ASE Kaohsiung, Taiwan and Test Operation In ON Semiconductor Shenzhen, China for WLCSP package, NCP136xFCRCxxxT2G, NCP59771xFCRCxxxT2G devices (Case outline 567YU). Addition of Aizu Fujitsu Semiconductor Manufacturing located in Aizuwakatmatsu, Japan as Wafer Fab	
Proposed First Ship date:	29 July 2021 or earlier if approved by customer	
Contact Information:	Contact your local ON Semiconductor Sales Office or Marek.Haluska@onsemi.com	
PCN Samples Contact:	Contact your local ON Semiconductor 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.	
Type of Notification:	This is an Initial Product/Process Change Notification (IPCN) sent to customers. An IPCN is an 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 90 days prior to implementation of the change. In case of questions, contact PCN.Support@onsemi.com	
Marking of Parts/ Traceability of Change:	Affected products will be traceable by date code.	
Change Category:	Test Change, Assembly Change, Wafer Fab Change	
Change Sub-Category(s):	Manufacturing Site Addition	
Sites Affected:		
ON Semiconductor Sites	External Foundry/Subcon Sites	
ON Semiconductor Aizu, Japan	ASEKH, Taiwan (Kaohsiung)	
ON Semiconductor Shenzhen, China		
Description and Purpose:		
Capacity expansion for WLCSP packages. Upon PCN effectivity affected devices may be sourced from any of the qualified supply chain flows. Bump & backgrind processing will be located in ASE Kaohsiung, Taiwan (ASEKH). Probe & post processing will be located in ON Semiconductor, Shenzhen, China (ONSC). Addition of Aizu Fujitsu Semiconductor Manufacturing located in Aizuwakatmatsu, Japan as Wafer Fab option for these parts. Future voltage options of this product family will be sourced from any of these qualified supply chain combinations. The change will apply to all devices shown in the affected part list (below).		
	Before Change Description	After Change Description
Wafer Fab	ON Semiconductor Gresham, North America United States Oregon	ON Semiconductor Aizu, Asia Japan Fukushima; ON Semiconductor Gresham, North America United States Oregon
Bump & backgrind site	JCAP, Asia China Jiangsu	ASEKH, Asia Taiwan Kaohsiung; JCAP, Asia China Jiangsu
Probe & post process site	JCAP, Asia China Jiangsu	ONSC Semiconductor, Asia China Shenzhen; JCAP, Asia China Jiangsu
Bump composition	JCAP: Pure Sn	JCAP: Pure Sn ASEKH: 98.2 % Sn + 1.8 % Ag
Polyimide material	JCAP: HD4100	JCAP: HD4100 ASEKH: HD4000E
PI2 thickness	JCAP: 5µm	JCAP: 5µm ASEKH: 7.5µm

**Qualification Plan:**QV DEVICE NAME: NCP136AFCRC080T2G, NCP136AFCRC040T2GRMS: 76296,76297,76298Package: WLCSP 6

Test	Specification	Condition	Interval
HTOL	JESD22-A108	Ta=125°C, 100 % max rated Vcc	1008 hrs
HTSL	JESD22-A103	Ta= 150°C	1008 hrs
TC	JESD22-A104	Ta= -40°C to +125°C	850 cyc
HAST	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hrs
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs
PC	J-STD-020 JESD-A113	MSL 1 @ 260°C	3x reflow
PD	JESD22-B100	Per case outline	Cpk>1.67
SBS	AEC-Q100-010	Solder Ball Shear	Cpk>1.67
ED	ON Data Sheet	Electrical Distributions	Cpk>1.67

*this table apply for each RMS

Estimated date for qualification completion: 30 June 2021

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
NCP136AFCRC040T2G	NCP136AFCRC040T2G
NCP136AFCRC080T2G	NCP136AFCRC040T2G
NCP59771AFCRCADJT2G	NCP136AFCRC040T2G