ON Semiconductor®

Initial Product/Process Change Notification

Document # : IPCN21237ZI
Issue Date: 22 June 2017

Title of Change:	Addition of ON Semiconductor Gresham, Oregon, as wafer fab location (I3T50 technology), currently manufactured in Fab2, Oudenaarde, Belgium for the **NCV70627DQ001R2G** product. New OPN will be dual source wafer fab.
Proposed Changed Material First Ship Date:	30 November 2018
Current Material Last Order Date:	N/A
Current Material Last Delivery Date:	N/A
Product Category:	Active components – Integrated circuits
Contact information	Contact your local ON Semiconductor Sales Office
Samples	Contact your local ON Semiconductor Sales Office to place sample order. Sample requests are to be submitted no later than 45 days after publication of this change notification.
Sample Availability Date:	29 November 2017
PPAP Availability Date:	13 December 2017
Additional Reliability Data	Contact your local ON Semiconductor Sales Office or <Catherine.DeKeukeleire@onsemi.com>
Type of Notification	This is an Initial Product/Process Change Notification (IPCN) sent to customers. IPCNs are issued at least 30 days prior to the issuance of the Final Change Notice (FPCN). 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 12 months prior to implementation of the change. In case of questions, contact <PCN.Support@onsemi.com>.

Change Category	**Type of Change**
Process – Wafer Production	New wafer diameter
Process – Wafer Production	Move of all or part of wafer fab to a different location/site/subcontractor
Process – Wafer Production	New / change of passivation or die coating (without bare die)
Design	Design Change in Routing
Process – Wafer Production	Change in process technology (e. g. process changes like lithography, etch, oxide deposition, diffusion, die back surface preparation/backgrind, ...)
Equipment	Production from a new equipment/tool which uses a different basic technology or which due to its unique form or function can be expected to influence the integrity of the final product
Process – Assembly	Change of product marking

Description and Purpose:

Addition of ON Semiconductor Gresham, Oregon as wafer fab location (I3T technology, 200 mm fab), currently manufactured in Fab2, Oudenaarde, Belgium (150 mm fab) for the NCV70627DQ001R2G product. This will increase ON Semiconductor's wafer fab capacity and flexibility for this device.

Minor design changes to improve performance and manufacturability.

	Before Change Description	After Change Description
Wafer fab location	Fab2, Oudenaarde, Belgium	Fab2, Oudenaarde, Belgium ON Gresham, Oregon, USA
Wafer Fab Process Equipment	Identical to Gresham except for: Implant: Equipment brand B Photo: Stepper Contact/Via W-fill integration: W-etchback equipment IMD/ILD: Equipment brand C	Identical to Fab2 except for: Implant: Varian or Axcelis GSD Photo: ASML I-line or Deep UV Stepper Contact/Via W-fill integration: W-CMP (Novellus) IMD/ILD: Novellus Concept Two
Wafer Diameter	Substrate: Si (100) 6" B	Substrate: Si (100) 8" B
Wafer Fab BOM	ILD: USG / BPSG	ILD: USG / PSG/USG
Design Change in routing	Metal Coverage: Three matching sensitive circuits covered with high density of top metal.	Metal Coverage Updates: Existing metal slot size increased from 1x1 to 2x2 um; Additional metal slots added.
Part Marking	Without Fab Indicator	With Fab Indicator

Reason / Motivation for Change:	**Benefit of the change**: Provide additional wafer fab capacity and flexibility for manufacturing. **Risk for Late Release:** Possible supply disruptions.
Anticipated impact on fit, form, function, reliability, product safety or manufacturability	The qualification is just starting up. No anticipated impacts.

Sites Affected:

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

Marking of Parts/ Traceability of Change:	For Traceablity the device marking will be updated with the Fab indicator.

Reliability Data Summary:

DEVICE NAME: NCV70627

PACKAGE: SSOP36-EP

Test	Specification	Condition	Interval	Sample size
HTOL	JESD22-A108	Ta=125°C	1500 hours	3 x 77
ELFR	JESD22-A108	Ta=125°C	48 hours	3 x 800
HTSL	JESD22-A103	Ta= 175°C	500 hours	3 x 77
TC	JESD22-A104	Ta= -55°C to +150°C	2000 cycles	3 x 77
PTC	JESD22-A105	Ta= -40°C to +125°C	1000 cycles	1 x 45
HAST	JESD22-A110	110°C, 85% RH, 18.8psig, bias	264 hours	3 x 77
UHST	JESD22-A118	110°C, 85% RH, 18.8psig, unbiased	264 hours	3 x 77
PC	J-STD-020	MSL 2 @ 260 °C		
ESD - HBM	Q100-002	As per product specification		3 per level
ESD - CDM	Q100-011	As per product specification		3 per level
LU	Q100-004	As per product specification		6

Electrical Characteristic Summary:

Electrical characteristics are not impacted.

List of Affected Standard Parts:

Current Part Number	Dual Source Part Number	Qualification Vehicle
NCV70627DQ001R2G	NCV70627DQ002R2G-BA	0C627-600