ON Semiconductor®

Final Product/Process Change Notification

Document # : FPCN22278Z
Issue Date: 4 July 2018

Title of Change:	Wafer fab transfer to ON Semiconductor Gresham, Oregon, from Fab2, Oudenaarde, Belgium for NCV70627MW002R2G (I3T50 technology) product. Also moved from QFN Assembly Wetable Flank to Step Cut processing and updated the leadframe and die attach.
Proposed Changed Material First Ship Date:	4 July 2019
Current Material Last Order Date:	25 May 2019
Current Material Last Delivery Date:	25 Nov 2019
Product Category:	Active components – Integrated circuits
Contact information:	Contact your local ON Semiconductor Sales Office or Alicia.Tuckett@onsemi.com
Samples:	Contact your local ON Semiconductor Sales Office or PCN.Samples@onsemi.com to place sample order. Sample requests are to be submitted no later than 45 days after publication of this change notification.
Sample Availability Date:	28 May 2018
PPAP Availability Date:	29 June 2018
Additional Reliability Data:	Contact your local ON Semiconductor Sales Office or Catherine De Keukeleire <Catherine.DeKeukeleire@onsemi.com>
Type of Notification:	This is a Final Product/Process Change Notification (FPCN) sent to customers. FPCNs are issued 12 months prior to implementation of the change or earlier upon customer approval. ON Semiconductor will consider this proposed change and it's conditions acceptable, unless an inquiry is made in writing within 45 days of delivery of this notice. To do so, contact <PCN.Support@onsemi.com>.
Change Category	**Type of Change**
Design	Design Change in Routing-Metal Slotting and Bond pad update
Process – Wafer Production	New wafer diameter Move of all or part of wafer fab to a different location/site/subcontractor
Process – Assembly	Change of product marking
Process – Assembly	Change of lead and heat slug plating material/plating thickness (external)
Process-Assembly	Change of Leadframe
Process-Assembly	Change of Die attach
Other	New OPN NCV70627MW002AR2G

Description and Purpose:

Wafer fab transfer to ON Semiconductor Gresham, Oregon, as wafer fab location (I3T50 technology), currently manufactured in Fab2, Oudenaarde, Belgium for the **NCV70627MW002R2G** product. Also moved from QFN Assembly Wetable Flank to Step Cut processing for improved shelf life from 1 to 2 years and allocw re-bake of the components when shelf life is expired. Assembly leadframe and die attach have also been updated.

Wafer fab location	Fab2, Oudenaarde, Belgium (Current Fab)	ON Gresham, Oregon, USA (New Fab)
Wafer Diameter	Substrate: Si (150mm) 6”	Substrate: Si (200mm) 8"
Design Change in routing-Metal Slotting	Metal Coverage: 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.
Design Change in Routing-Updated Bond Pads	Old Standard bond pads	Ring Bond Pads
Moved from QFN Assembly Wetable Flank to Step Cut processing	Electroless plated wettable flank process	Step Cut electro plated wettable flank process
Leadframe	copper alloy C194	copper alloy EFTEC64-T
Die Attach	Abletherm 8006NS non conductive wafer backside coating	Hitachi HR9070-20-1 non conductive die attach film
OPN	NCV70627MW002R2G	NCV70627MW002AR2G
Part Marking	Without Fab Indicator	With Fab Indicator

Reason / Motivation for Change:	**Benefit of the change**: As part of ONSEMI continuous improvement program, we are moving the NCV70627MW002R2G from SFS to SLP and at the same time from our 6" to our 8" line. **Risk for Late Release:** Possible supply disruptions.	
Anticipated impact on fit, form, function, reliability, product safety or manufacturability	The device has been qualified and validated based on the same Product Specification. The device has successfully passed the qualification tests. Potential impacts can be identified, but due to testing performed by ON Semiconductor in relation to the PCN, associated risks are verified and excluded. No anticipated impacts.	
Sites Affected:	ON Semiconductor Sites: ON Gresham, Oregon	External Foundry/Subcon Sites:
Marking of Parts/ Traceability of Change:	For Traceablity the device marking will be updated with the Fab indicator.	

Reliability Data Summary: See Qual report, 8D and AEC1-pager attached.

To access attachment:

1. *Download pdf copy of the PCN to your computer*
2. *Open the downloaded pdf copy of the PCN*
3. *Click on the paper clip icon available on the menu provided in the left/bottom portion of the screen to reveal the Attachment field*
4. *Then click on the attached file/s*

Electrical Characteristic Summary: Electrical characteristics are not impacted. See attached 3-lot Cpk report.

List of affected Standard Parts:

Current Part Number	New Part Number	Qualification Vehicle
NCV70627MW002R2G	NCV70627MW002AR2G	**0C627-601**

Appendix A: Changed Products

Product	Customer Part Number	New Part Number	Qualification Vehicle
NCV70627MW002R2G		NCV70627MW002AR2G	0C627-601