

Title of Change:	Pattern change to Die bond pad Top Metal for ACMOS2 Technology.			
Proposed first ship date:	19 October 2017 <i>or earlier upon customer approval</i>			
Contact information:	Contact your local ON Semiconductor Sales Office or <alan.garlington@onsemi.com></alan.garlington@onsemi.com>			
Samples:	Contact your local ON Semiconductor Sales Office			
Additional Reliability Data:	Contact your local ON Semiconductor Sales Office or <tomas.vajter@onsemi.com>.</tomas.vajter@onsemi.com>			
Type of notification:	This is a Final Product/Process Change Notification (FPCN) sent to customers. FPCNs are issued 12months prior to implementation of the change or earlier upon customer approval.			
	ON Semiconductor will consider this proposed change and its conditions acceptable, unless an inquiry is made in writing within 30 days of delivery of this notice. To do so, contact <pcn.support@onsemi.com>.</pcn.support@onsemi.com>			
Change Part Identification:	ange Part Identification: Parts with Date codes on or after ww36 – 2017 may utilize the new structure			
Change category:	🖾 Wafer Fab Change 🔲 Assembly Change 🔲 Test Change 🔲 Other			
Change Sub-Category(s):  Manufacturing Site Change/ Manufacturing Process Char  Sites Affected: All site(s) Not ap	Addition Material Change Datasheet/Product Doc change hge Product specific change Shipping/Packaging/Marking Other: <u>Die Pad Structure</u> Oplicable ON Semiconductor site(s) : External Foundry/Subcon site(s)			
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# **Description and Purpose:**

The wafer pad structure will be modified to have a "*Zig-zag*" type of pattern. This is being done to improve the robustness of the metal adhesion to the Silicon and will enhance the wire bond adhesion to the metal surface. There is no change to the actual metallization on the top pads of the die. Only the appearance of the pad metal will appear different.

### Appearance of New pad:



Additional devices which use the ACMOS2 technology will be converted to utilize this structure in the future. One or more FPCN's will be published as new families are qualified.

Customers may authorize earlier implementation of this change upon request.



**Reliability Data Summary:** 

## NCP605MN25T2G - 3 Qualification lots, MY1119961A; MY1122608A; MY1122608B

Test	Specification	Condition	Interval	Results
HTSL	JESD22-A103	Ta= 150°C	1008 hrs	0/252
TC	JESD22-A104	Ta= -65°C to +150°C	1000 сус	0/252
SAT (MSL1)	Scanning Acoustical Tomography	No Delamination pre and post testing	3 Lots	Pass
BPS	Bond Pull Strength MILSTD883 Mthd 2011	Pre Temp Cycle	2 Lots	4.66/3.77
BPS	Bond Pull Strength MILSTD883 Mthd 2011	Post TC 500 Hrs	3 Lots	2.30/3.22/4.22
BS	Bond Shear	Min Cpk = 1.33	2 Lots	2.05/3.77

## NOTE: AEC- 1pager is attached.

To access file attachments on pdf copy of PCN, please be guided by the steps below:

- 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:**

There is no change to the electrical characteristics of the devices. All data sheet functionality and parameters remain exactly the same.



List of Affected Standard Parts:				
Part Number	Qualification Vehicle			
NCV8560MN150R2G				
NCV8560MN180R2G				
NCV8560MN250R2G				
NCV8560MN280R2G				
NCV8560MN300R2G	1			
NCV8560MN330R2G				
NCV8560MN350R2G				
NCV8560MN500R2G				
NCV8560MNADJR2G				
NCV8560SN130T1G				
NCV8560SN150T1G				
NCV8560SN180T1G				
NCV8560SN250T1G				
NCV8560SN280T1G				
NCV8560SN300T1G				
NCV8560SN330T1G				
NCV8560SN350T1G				
NCV8560SN500T1G	NCP605MIN2512G			
NCV8560SNADJT1G				
NCV8605MN15T2G				
NCV8605MN18T2G				
NCV8605MN25T2G				
NCV8605MN28T2G				
NCV8605MN30T2G				
NCV8605MN33T2G				
NCV8605MN50T2G				
NCV8605MNADJT2G				
NCV8606MN15T2G				
NCV8606MN18T2G				
NCV8606MN25T2G				
NCV8606MN28T2G				
NCV8606MN30T2G				
NCV8606MN33T2G				
NCV8606MN50T2G				
NCV8606MNADJT2G				