



Title of Change:	Qualification of Bucheon 8inch as an additional Wafer FAB facility for Auto Non Punch Through Trench IGBT technology.
Proposed Changed Material First Ship Date:	04 Nov 2021 or earlier if approved by customer
Current Material Last Order Date:	N/A <i>Orders received after the Current Material Last Order Date expiration are to be considered as orders for new changed material as described in this PCN. Orders for current (unchanged) material after this date will be per mutual agreement and current material inventory availability.</i>
Current Material Last Delivery Date:	N/A <i>The Current Material Last Delivery Date may be subject to change based on build and depletion of the current (unchanged) material inventory</i>
Product Category:	Active components – Integrated circuits
Contact information:	Contact your local ON Semiconductor Sales Office or Daniel.Jeon@onsemi.com
PCN Samples Contact:	Contact your local ON Semiconductor Sales Office to place sample order or <PCN.samples@onsemi.com> . Sample requests are to be submitted no later than 45 days after publication of this change notification. Samples delivery timing will be subject to request date, sample quantity and special customer packing/label requirements.
Sample Availability Date:	N/A
PPAP Availability Date:	N/A
Additional Reliability Data:	Contact your local ON Semiconductor Sales Office or Choonbae.Park@onsemi.com
Type of Notification:	This is a Final Product/Process Change Notification (FPCN) sent to customers. The change will be implemented at 'Proposed Change Material First Ship Date' in compliance to J-STD-46 or ZVEI, or earlier upon customer approval, or per our signed agreements. 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	
Category	Type of Change
Process - Wafer Production	New wafer diameter
Description and Purpose:	
<p>Additional qualification of BK 8inch for Auto Non Punch Through Trench Insulated Gate Bipolar Transistor technology for Intelligent Power Module, only qualified wafer size, 8inch. No change in assembly and test. It is for capacity constrain solution.</p> <p>There is no material change and marking change</p>	



Reason / Motivation for Change:	Capacity improvement	
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	External Foundry/Subcon Sites	
ON Semiconductor Bucheon, Korea	None	
Marking of Parts/ Traceability of Change:	Marking is same / trace by date code.	

Reliability Data Summary:

QV DEVICE NAME : NFVA23512NP2T
RMS: 70949, 70956, 74197
PKG: ASPM34

Test	Specification	Condition	Interval	Lot 1	Lot 2	Lot 2
HTRB	AQG324, AECQ101/Q100	*** Tj = 125°C, Vce=1200V	1008 hrs	0/26	0/26	0/26
H3TRB	AQG324, AECQ101/Q100	85C, 85%RH, Vce=100V	1008 hrs	0/26	0/26	0/26
HTGB+	AQG324, AECQ101	Tj 150C, Vges=20V (tested with TO3P)	1008 hrs	0/77	0/77	0/77
HTGB-	AQG324	Tj 150C, Vges=-20V (tested with TO3P)	1008 hrs	0/39	0/39	0/39
uHAST	AECQ101/Q100	130C/85%RH, no bias	96 hrs	0/77	0/77	0/77
TC	AECQ101/Q100	-40~125C Transition 20min max in one chamber equip.	1000cyc	0/77	0/77	0/77
TS	AQG324, AECQ101/Q100	-40~125C, air-to-air Transition 30sec max, dwell min 15min at min/max temp	1000cyc	0/77	0/77	0/77
PCsec1	AQG324	4 sec ON , dTj 100C Tjmax 155	Test to fail	Failed from 128Kcyc		
PCsec2	AQG324	4sec On, dTj 140C Tjmax 155	Test to fail	Failed from 58Kcyc		
PCsec3	AQG324	4sec On, dTj 140C Tjmax 165	Test to fail	Failed from 64Kcyc		
PCmin1	AQG324	16sec On, dTj 100C Tjmax 155	Test to fail	Failed from 81Kcyc		
PCmn2	AQG324	16sec On, dTj 140C Tjmax 165	Test to fail	Failed from 20Kcyc		

NOTE: AEC-1pager is attached.

To view attachments:

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 Characteristics Summary:

Electrical characteristics are not impacted.



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**.

Current Part Number	New Part Number	Qualification Vehicle
NFVA25012NP2T	NA	NFVA25012NP2T
NFVA23512NP2T	NA	NFVA25012NP2T
NFVA22512NP2T	NA	NFVA25012NP2T