

<b>Title of Change:</b>	Improve Front barrier metal adhesion by changing barrier metal scheme.
<b>Proposed Changed Material First Ship Date:</b>	11 Jul 2023 or earlier if approved by customer
<b>Current Material Last Order Date:</b>	31 Mar 2023 <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>
<b>Current Material Last Delivery Date:</b>	10 Jul 2023 <i>The Current Material Last Delivery Date may be subject to change based on build and depletion of the current (unchanged) material inventory</i>
<b>Product Category:</b>	Active components – Discrete components
<b>Contact information:</b>	Contact your local onsemi Sales Office or <a href="mailto:Peter.Lee@onsemi.com">Peter.Lee@onsemi.com</a>
<b>PCN Samples Contact:</b>	Contact your local onsemi Sales Office to place sample order. 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.
<b>Sample Availability Date:</b>	31 Jan 2023
<b>PPAP Availability Date:</b>	31 Jan 2023
<b>Additional Reliability Data:</b>	Contact your local onsemi Sales Office or <a href="mailto:Byeongyeop.Lee@onsemi.com">Byeongyeop.Lee@onsemi.com</a>
<b>Type of Notification:</b>	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. onsemi 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 <a href="mailto:PCN.Support@onsemi.com">PCN.Support@onsemi.com</a> .
<b>Change Category</b>	
<b>Category</b>	<b>Type of Change</b>
Process - Wafer Production	New / change of metallization (specifically chip frontside)

**Description and Purpose:**

It is to improve front barrier metal adhesion by changing barrier metal scheme.

	From	To
Barrier metal scheme	Ti/TiN (500A/900A) 	Ti 2kA with RTA 

The change results in a marking change, please refer to below table.

	From	To
Product marking change	Tracecode:1(YWWZZ) Line2:NVHL080 Line3:N120SC1	Tracecode:1(YWWZZ) Line2:NVHL080 Line3:N120SC1A

<b>Reason / Motivation for Change:</b>	Quality improvement			
<b>Anticipated impact on fit, form, function, reliability, product safety or manufacturability:</b>	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 onsemi in relation to the PCN, associated risks are verified and excluded.  No anticipated impacts.			
<b>Sites Affected:</b>				
<b>onsemi Sites</b>			<b>External Foundry/Subcon Sites</b>	
onsemi Bucheon, Korea			None	
<b>Marking of Parts/ Traceability of Change:</b>	Change Marking : please refer to below. Tracecode:1(YWWZZ) => 1(YWWZZ) Line2:NVHL080 => NVHL080 Line3:N120SC1 => N120SC1A			
<b>Reliability Data Summary:</b>				
<b>QV DEVICE NAME: NVHL020N120SC1</b>				
<b>RRF# 62384</b>				
<b>PACKAGE: TO247</b>				
Test	Specification	Condition	Interval	Results
HTRB	AEC-Q101 / JESD22-A108	Tj=175C, 100% Max BV	1,008hrs	0/231
HTGB(+)	AEC-Q101 / JESD22-A108	Tj=175C, Vgs= +Max Vgs	1,008hrs	0/231
HTGB(-)	AEC-Q101 / JESD22-A108	Tj=175C, Vgs= -Min Vgs	1,008hrs	0/231
Transient HTGB		Tj=175C, -5V~+20V,100Hz, 50% duty	1,008hrs	0/75
HTSL	JESD22-A103	Ta=175C	1,008hrs	0/231
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 5 min	15,000cyc	0/231
RSH	AEC-Q101 / JESD22-B106	260C	10sec	0/30
TC	AEC-Q101 / JESD22-A104	Ta= -55°C to +150°	1,000cyc	0/231
HAST	AEC-Q101 / JESD22-A110	Temp= +130°C, RH=85% , p = 18.8 psig, bias=960V (80% BV)	96hrs	0/231
uHAST	AEC-Q101 / JESD22-A110	Temp= +130°C, RH=85% , p = 18.8 psig	96hrs	0/231
<b>NOTE: AEC-1pager is attached.</b>				
<i>To view attachments:</i>				
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				
<b>Electrical Characteristics Summary:</b>				
Electrical characteristics are not impacted.				



## Final Product/Process Change Notification

Document #:FPCN25184Z

Issue Date:11 Jan 2023

### 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
NVHL080N120SC1	NVHL080N120SC1A	NVHL020N120SC1