



Title of Change:	Qualification of Power Schottky Back Metal Thinning with Die Shrink for SOD 123.									
Proposed Changed Material First Ship Date:	13 April 2018 <i>or earlier upon customer approval.</i>									
Current Material Last Order Date:	N/A									
Current Material Last Delivery Date:	N/A									
Product Category:	Active components – Discrete components									
Contact information	Contact your local ON Semiconductor Sales Office or < SitiNurhaza.MohdRamli @onsemi.com >									
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:	28 May 2017									
PPAP Availability Date:	28 May 2017									
Additional Reliability Data	Contact your local ON Semiconductor Sales Office or < MohtAzizi.Azman@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	Die Shrink									
Process – Wafer Production	New / change of metallization (specifically chip backside)									
Description and Purpose:										
<p>This is the final product change notification, announcing that ON Semiconductor is qualifying Power Schottky Back Metal Thinning with Die Shrink on selected automotive qualified OPNS listed in this FPCN OPNs. The detail change as below:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="background-color: #92d050;">Material to be changed</th> <th style="background-color: #92d050;">Before Change</th> <th style="background-color: #92d050;">After Change</th> </tr> </thead> <tbody> <tr> <td>Back metal thickness</td> <td>12kA Au</td> <td>8kA Au</td> </tr> <tr> <td>Die Shrink- Guard Ring Width</td> <td>4mils</td> <td>2mils</td> </tr> </tbody> </table> <p>No other changes imposed on the affected OPNs.</p>		Material to be changed	Before Change	After Change	Back metal thickness	12kA Au	8kA Au	Die Shrink- Guard Ring Width	4mils	2mils
Material to be changed	Before Change	After Change								
Back metal thickness	12kA Au	8kA Au								
Die Shrink- Guard Ring Width	4mils	2mils								
Reason / Motivation for Change:	-Wafer Fab Process standardization and throughput 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:										
<input checked="" type="checkbox"/> All site(s) <input type="checkbox"/> not applicable <input type="checkbox"/> ON Semiconductor site(s) : <input type="checkbox"/> External Foundry/Subcon site(s)										


**Marking of Parts/
Traceability of Change:**

There will be no change in the device marking scheme. Clean date code will be advised as requested.

Reliability Data Summary:

QV Device Name: NRVB0540T1G

Test	Specification	Condition	Interval	Results
HTRB	JESD22-A108	Ta=90C, 100% max rated V	1000hrs	0/240
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25C, delta Tj=100C On/off = 2min	15000cyc	0/240
TC	JESD22-A104	Ta = -65C to +150C	1000cyc	0/240
H3TRB	JESD22-A101	Ta = 85C RH = 85% bias = 80% rated V or 100V max	1000hrs	0/240
AC	JESD22-A102	Ta = 121C, P = 15 PSIG, RH = 100%, 96 Hours	192hrs	0/240
PC	J-STD-020 JESD-A113	MSL 1 @ 260C		0/960
RSH	JESD22-B106	Ta = 265C, 10 sec		0/90

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 are no changes in electrical characteristic; product performance meets data sheet specifications. Characterization data is available upon request.

List of Affected Standard Parts:

Current Part Number	Qualification Vehicle
NRVB0530T1G	NRVB0540T1G
NRVB0530T3G	
NRVB0540T1G	
NRVB0540T3G	
NRVB130T1G	
NRVB130T3G	
SBR80520LT1G	
SBR80520LT3G	