



<b>Title of Change:</b>	Gold wire to bare copper wire conversion and Nitto GE200 to Henkel GR640 molding compound conversion for Diode devices assembled in ON Semiconductor, Leshan facility.										
<b>Proposed Changed Material First Ship Date:</b>	28 March 2020										
<b>Current Material Last Order Date:</b>	11 September 2019 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.										
<b>Current Material Last Delivery Date:</b>	11 December 2019 The Current Material Last Delivery Date may be subject to change based on build and depletion of the current (unchanged) material inventory.										
<b>Product Category:</b>	Active components – Discrete components										
<b>Contact information:</b>	Contact your local ON Semiconductor Sales Office or < <a href="mailto:Andy.Tao@onsemi.com">Andy.Tao@onsemi.com</a> >										
<b>Samples:</b>	Contact your local ON Semiconductor Sales Office to place sample order or < <a href="mailto:PCN.samples@onsemi.com">PCN.samples@onsemi.com</a> > Sample requests are to be submitted no later than 45 days after publication of this change notification.										
<b>Sample Availability Date:</b>	26 April 2019										
<b>PPAP Availability Date:</b>	26 April 2019										
<b>Additional Reliability Data:</b>	Contact your local ON Semiconductor Sales Office or < <a href="mailto:Rui.Zhang@onsemi.com">Rui.Zhang@onsemi.com</a> >.										
<b>Type of Notification:</b>	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 <a href="mailto:PCN.Support@onsemi.com">PCN.Support@onsemi.com</a> .										
<b>Change Category</b>	<b>Type of Change</b>										
Process – Assembly	Change of wire bonding										
Process – Assembly	Change of mold compound										
<b>Description and Purpose:</b>											
Upon the expiration of this PCN, these devices will be built with 0.8mils bare copper wire & Henkel GR640 HV mold compound at the same site. Datasheet specifications and product electrical performance remain unchanged. Reliability qualification and full electrical characterization over temperature has been performed.											
	<table border="1"> <thead> <tr> <th></th> <th style="background-color: #92d050;">Before Change Description</th> <th style="background-color: #92d050;">After Change Description</th> </tr> </thead> <tbody> <tr> <td>Bond Wire</td> <td>0.8 mils gold wire</td> <td>0.8 mils bare copper wire</td> </tr> <tr> <td>Mold compound</td> <td>Hitach GE200F</td> <td>Henkel GR640 HV</td> </tr> </tbody> </table>			Before Change Description	After Change Description	Bond Wire	0.8 mils gold wire	0.8 mils bare copper wire	Mold compound	Hitach GE200F	Henkel GR640 HV
	Before Change Description	After Change Description									
Bond Wire	0.8 mils gold wire	0.8 mils bare copper wire									
Mold compound	Hitach GE200F	Henkel GR640 HV									
There is no product marking change as a result of this change.											
<b>Reason / Motivation for Change:</b>	<p><b>Change benefits for customer:</b> Copper wire is with higher Thermal conductivity and lower resistivity. Henkel GR640HV has better property to improve package encapsulation performance</p> <p><b>Risk for late release for customer:</b> Longer lead time due to limited flexibility in terms of manufacturing and capacity planning.</p>										



<p><b>Anticipated impact on fit, form, function, reliability, product safety or manufacturability</b></p>	<p>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.</p> <p>No anticipated impacts.</p>	
<p><b>Sites Affected:</b></p>	<p>ON Semiconductor Sites: ON Leshan, China</p>	<p>External Foundry/Subcon Sites: None</p>
<p><b>Marking of Parts/ Traceability of Change:</b></p>	<p>Products assembled with 0.8mils bare copper wire &amp; Henkel GR640 HV mold compound from ON Semiconductor, Leshan facility and will have a Finish Goods Date Code of WW47, 2019 or later.</p>	

**Reliability Data Summary:**

**QV DEVICE NAME:**  
**NSVMBD770DW1T1G**  
**PACKAGE: SC88**

Test	Specification	Condition	Interval	Results
HTRB	JESD22-A108	Ta=150°C, 100% max rated V	1008 hrs	0/231
HTSL	JESD22-A103	Ta= 150°C	2016 hrs	0/231
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	30K cyc	0/231
TC	JESD22-A104	Ta= -65°C to +150°C	2000 cyc	0/231
HAST	JESD22-A110	130°C, 85% RH, 18.8psig, 80% rated V, or 100V max	192 hrs	0/231
AC	JESD22-A102	121°C, 100% RH, 15psig, unbiased	96 hrs	0/231
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C	-	0/924
RSH	JESD22- B106	Ta = 265°C, 10 sec	-	0/30
SD	JSTD002	Ta = 245°C, 10 sec	-	0/30

**QV DEVICE NAME: SGNSVD350HT1G**  
**PACKAGE: SOD323**

Test	Specification	Condition	Interval	Results
HTRB	JESD22-A108	Ta=150°C, 100% max rated V	1008 hrs	0/231
HTSL	JESD22-A103	Ta= 150°C	2016 hrs	0/231
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	30K cyc	0/231
TC	JESD22-A104	Ta= -65°C to +150°C	2000 cyc	0/231
H3TRB	JESD22-A101	85°C, 85% RH, 80% rated V or 100V max	2016 hrs	0/231
AC	JESD22-A102	121°C, 100% RH, 15psig, unbiased	96 hrs	0/231
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C	-	0/924
RSH	JESD22- B106	Ta = 265°C, 10 sec	-	0/30
SD	JSTD002	Ta = 245°C, 10 sec	-	0/30



**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
- 5.

**Electrical Characteristic Summary:**

Three temperature characterization and ESD performance meet datasheet specification. Detail of electrical characterization result is available upon request.

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**.

Part Number	Qualification Vehicle
NSVBAV99WT3G	NSVMBD770DW1T1G
NSVBAS116LT3G	SGNSVD350HT1G
NSVMMBD354LT1G	
SBAS70-04LT1G	
SMMBD301LT3G	
SMMBD701LT1G	



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## Appendix A: Changed Products

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Product	Customer Part Number	New Part Number	Qualification Vehicle
NSVBAS116LT3G		NA	SGNSVD350HT1G
NSVBAV99WT3G		NA	NSVMBD770DW1T1G
NSVMMD354LT1G		NA	SGNSVD350HT1G
SBAS70-04LT1G		NA	SGNSVD350HT1G
SMMBD301LT3G		NA	SGNSVD350HT1G
SMMBD701LT1G		NA	SGNSVD350HT1G