



## Initial Product/Process Change Notification

Document # : IPCN22084Z

Issue Date: 6 December 2017

<b>Title of Change:</b>	Gold wire to bare copper wire conversion and Nitto GE200 to Henkel GR640 molding compound conversion for SOT23 diode and transistor devices assembled in ON Semi Leshan facility.										
<b>Proposed Changed Material First Ship Date:</b>	1 March 2019										
<b>Current Material Last Order Date:</b>	1 February 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>	31 January 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 <Harry.Tian@onsemi.com>										
<b>Samples:</b>	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.										
<b>Sample Availability Date:</b>	Within 4weeks per request date										
<b>PPAP Availability Date:</b>	9 March 2018										
<b>Additional Reliability Data:</b>	Contact your local ON Semiconductor Sales Office or <Rui.Zhang@onsemi.com>.										
<b>Type of Notification:</b>	This is an Initial Product/Process Change Notification (IPCN) sent to customers. IPCNs are issued at least 30 days prior to the issuance of the Final Change Notice (FPCN). An IPCN is an advance notification about an upcoming change and contains general information regarding the change details and devices affected. It also contains the preliminary reliability qualification plan. The completed qualification and characterization data will be included in the Final Product/Process Change Notification (FPCN). This IPCN notification will be followed by a Final Product/Process Change Notification (FPCN) at least 12 months prior to implementation of the change. In case of questions, contact <PCN.Support@onsemi.com>.										
<b>Change Category</b>	<b>Type of Change</b>										
Process – Assembly	Change of wire bonding										
<b>Description and Purpose:</b>											
ON Semiconductor is notifying customers of its use of 0.8mils bare Cu wire and Henkel molding compound for SOT23 diode and transistor devices at ON Semiconductor's Leshan, China facility.											
Upon the expiration of this PCN, these devices will be built with 0.8mils bare Cu wire and Henkel molding 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>Material to be changed</th> <th>Before Change Description</th> <th>After Change Description</th> </tr> </thead> <tbody> <tr> <td>Wire</td> <td>0.8mils gold wire</td> <td>0.8mils bare copper wire</td> </tr> <tr> <td>Molding compound</td> <td>Nitto GE200</td> <td>Henkel GR640</td> </tr> </tbody> </table>	Material to be changed	Before Change Description	After Change Description	Wire	0.8mils gold wire	0.8mils bare copper wire	Molding compound	Nitto GE200	Henkel GR640	
Material to be changed	Before Change Description	After Change Description									
Wire	0.8mils gold wire	0.8mils bare copper wire									
Molding compound	Nitto GE200	Henkel GR640									
<b>Reason / Motivation for Change:</b>	<ul style="list-style-type: none"> <li>- <u>Change benefits for customer:</u> Copper wire is with higher Thermal conductivity and lower Resistivity; Proposed Henkel compound GR640HV has better fluidity and flexural strength than Hitachi GE-200F compound.</li> <li>- <u>Risk for late release for customer:</u> Longer lead time due to limited flexibility in terms of manufacturing and capacity planning.</li> </ul>										



<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 ON Semiconductor in relation to the PCN, associated risks are verified and excluded.  No anticipated impacts.	
<b>Sites Affected:</b>	ON Semiconductor Sites: ON Leshan, China	External Foundry/Subcon Sites: None
<b>Marking of Parts/ Traceability of Change:</b>	Products assembled with 0.8mils bare Cu Wire and Henkel molding compound from ON Semiconductor Leshan facility will have a Finish Goods Date Code of WW09, 2019 or later.	

**Reliability Data Summary:**

Qual Vehicle Device: SGNSVD350HT1G

PACKAGE: SOD323

Test	Specification	Condition	Interval
PC	JESD22-A113	MSL 1 @ 260 °C	Before TC, AC, H3TRB, IOL
AC	JESD22-A102	121°C, 100% RH, ~15psig, unbiased	96 hrs
TC	JESD22-A104	Ta= - 65°C to +150°C	2000 cyc
H3TRB	JESD22-A101	85°C, 85% RH, V=80% rated V or 100V max.	2016 hrs
IOL	MIL-STD-750 (M1037)	Ta=+25°C, delta Tj=100°C On/off = 2 min	30000 cyc
HTRB	JESD22- A108	Tj= max, V=100% rated V, 1008 Hrs	1008hrs
HTSL	JESD22- A103	Temp.=165°C,no bias,2016hours	2016hrs
RSH	JESD22- B106	Ta = 265C, 10 sec	-
SD	JSTD002	Ta = 245C, 10 sec	-

**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 Standard Parts:**

Current Part Number	Qualification Vehicle
NSVMMBD354LT1G	SGNSVD350HT1G
SBAS70-04LT1G	
SMMBD301LT3G	
SMMBD701LT1G	