



Title of Change:	Gold to bare copper wire and Hitachi to Henkel mold compound conversion for Zener and ESD Protection devices assembled in ON Semiconductor Leshan facility.									
Proposed Changed Material First Ship Date:	1 March 2020									
Current Material Last Order Date:	NA 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.									
Current Material Last Delivery Date:	NA The Current Material Last Delivery Date may be subject to change based on build and depletion of the current (unchanged) material inventory.									
Product Category:	Active components – Discrete components									
Contact information:	Contact your local ON Semiconductor Sales Office or < Jim.Peng@onsemi.com >									
Samples:	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.									
Sample Availability Date:	5 April 2019									
PPAP Availability Date:	5 April 2019									
Additional Reliability Data:	Contact your local ON Semiconductor Sales Office or < Rui.Zhang@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									
Process – Assembly	Change of wire bonding Change of mold compound									
Description and Purpose: Upon the expiration of this PCN, these devices will be built with 0.8mils bare copper wire and 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. The copper wire is with higher thermal conductivity and lower resistivity which benefits for customer application. Henkel mold compound has better property to improve package encapsulation performance. This is to unify the wire material in process also. There is no change in the fit, form or functions of the affected OPNs. <table border="1" data-bbox="350 1558 1276 1692"> <thead> <tr> <th>Material to be change</th><th>Before Change Description</th><th>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>Hitachi GE200F</td><td>Henkel GR640 HV</td></tr> </tbody> </table>		Material to be change	Before Change Description	After Change Description	Bond Wire	0.8 mils gold wire	0.8 mils bare copper wire	Mold Compound	Hitachi GE200F	Henkel GR640 HV
Material to be change	Before Change Description	After Change Description								
Bond Wire	0.8 mils gold wire	0.8 mils bare copper wire								
Mold Compound	Hitachi GE200F	Henkel GR640 HV								



Reason / Motivation for Change:	Change benefits for customer: Copper wire is with higher thermal conductivity and lower resistivity. Henkel mold compound has better property to improve package encapsulation performance. Risk for late release for customer: Longer lead time due to limited flexibility in terms of manufacturing and capacity planning.	
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: ON Leshan, China	External Foundry/Subcon Sites: None
Marking of Parts/ Traceability of Change:	Products assembled with 0.8mils bare copper wire and Henkel mold compound from ON Semiconductor Leshan facility will have a Finish Goods Date Code of March, 2020 or later.	

Reliability Data Summary:**Qual Vehicle Device: SZMMBZ5270BLT1G**

Test	Specification	Condition	Interval	Results
PC	JESD22-A113	MSL 1 @ 260 °C	Before TC, UHAST, HAST, IOL	0/231
UHAST	JESD22 A118	Ta=130C, 85% RH, no bias, 96 hrs	96 hrs	0/231
TC	JESD22-A104	Ta= - 65°C to +150°C	2000 cyc	0/231
HAST	JESD22 A110	130C/85%RH, 80% rated V or 42V max, 192 hours.	192 hrs	0/231
IOL	MIL-STD-750 (M1037)	Ta=+25°C, delta Tj=100°C, On/off = 2 min	30000 cyc	0/231
HTRB	MIL-STD750-1	Tj= max, V=100% rated V, 1008 Hrs	1008 hrs	0/231
HTSL	JESD22- A103	Temp.=150°C,no bias,2016hours	2016 hrs	0/231
RSH	JESD22- B106	Ta = 265C, 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

**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**](#).

Current Part Number	Qualification Vehicle
SESDONCAN1LT1G	SZMMBZ5270BLT1G
SESDONCAN1LT3G	
SZBZX84C36LT3G	
SZMMBZ5248BLT3G	
SZMMBZ5262BLT1G	
SZSM05T1G	