ON Semiconductor®

Final Product/Process Change Notification

Document #:FPCN22168ZB
Issue Date:16 Apr 2020

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:	03 May 2021 or earlier if approved by customer
Current Material Last Order Date:	N/A *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:	N/A *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
PCN Samples Contact:	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. Samples delivery timing will be subject to request date, sample quantity and special customer packing/label requirements.
Sample Availability Date:	N/A
PPAP Availability Date:	N/A
Additional Reliability Data:	Contact your local ON Semiconductor Sales Office or ffvf9f@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

Category	**Type of Change**
Process - Assembly	Change of mold compound, Change of wire bonding

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.

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

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Reason / Motivation for Change:	Process/Materials Change
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	External Foundry/Subcon Sites
Leshan Phoenix Semiconductor, China	None

Marking of Parts/ Traceability of Change:	Assembly Date Code

Reliability Data Summary:

Qual Vehicle Device: SZMMBZ27VAWT1G
RMS: 45534
Package: SC-70

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	JEDS22- A103	Temp.=150°C,no bias,2016hours	2016 hrs	0/231
RSH	JESD22- B106	Ta = 265C, 10 sec	-	0/30

Qual Vehicle Device: SESD9L3.3ST5G
RMS: 42697
Package: SOD-923

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	JEDS22- A103	Temp.=150°C,no bias,2016hours	2016 hrs	0/231
RSH	JESD22- B106	Ta = 265C, 10 sec	-	0/30

NOTE: AEC 1 Pager 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 Characteristics Summary:

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	New Part Number	Qualification Vehicle
SZMMBZ27VAWT1G	NA	SZMMBZ27VAWT1G
SZNZ9F6V8ST5G	NA	SESD9L3.3ST5G