ON Semiconductor®

Initial Product/Process Change Notification

Document # : IPCN22168Z
Issue Date: 22 March 2018

Title of Change:	Gold wire to bare copper wire conversion for Zener and ESD Protection devices assembled in ON Semiconductor Leshan facility.
Proposed Changed Material First Ship Date:	30 April 2019
Current Material Last Order Date:	30 April 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.
Current Material Last Delivery Date:	30 April 2019 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. Sample requests are to be submitted no later than 45 days after publication of this change notification.
Sample Availability Date:	Samples should be available after completion of qualification.
PPAP Availability Date:	Samples should be available after completion of qualification.
Additional Reliability Data:	Contact your local ON Semiconductor Sales Office or <Rui.Zhang@onsemi.com>.
Type of Notification:	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>.
Change Category:	**Type of Change**
Process – Assembly	Change of wire bonding

Description and Purpose:

Material Change	Before Change Description	After Change Description
Wire	0.8 mils gold wire	0.8 mils bare copper wire

Reason / Motivation for Change:	**Change benefits for customer:** Copper wire is with higher Thermal conductivity and lower resistivity. **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 is being qualified and based on the same Product Specification. Potential impacts can be identified, but due to testing performed by ON Semiconductor in relation to the PCN, associated risks will be 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 0.8 mils bare copper wire from ON Semiconductor Leshan facility will have a Finish Goods Date Code of May, 2019 or later.	

Reliability Data Summary:

Test	Specification	Condition	Interval
PC	JESD22-A113	MSL 1 @ 260 °C	Before TC, UHAST, HAST, IOL
UHAST	JESD22 A118	Ta=130C, 85% RH, no bias, 96 hrs	96 hrs
TC	JESD22-A104	Ta= - 65°C to +150°C	2000 cyc
HAST	JESD22 A110	130C/85%RH, 80% rated V or 42V max, 192 hours.	192 hrs
IOL	MIL-STD-750 (M1037)	Ta=+25°C, delta Tj=100°C, On/off = 2 min	30000 cyc
HTRB	MIL-STD750-1	Tj= max, V=100% rated V, 1008 Hrs	1008 hrs
HTSL	JEDS22- A103	Temp.=150°C,no bias,2016hours	2016 hrs
RSH	JESD22- B106	Ta = 265C, 10 sec	-

Estimated date for qualification completion: 20 April 2018

Electrical Characteristic Summary:

Electrical characteristics will be performed and updated per FPCN.

List of Affected Standard Parts:

Current Part Number	Qualification Vehicle
SESD9L3.3ST5G	SESD9L3.3ST5G
SZESD7951ST5G	
SZESD9C3.3ST5G	
SZESD9C5.0ST5G	

Current Part Number	Qualification Vehicle
SZESDR0502BT1G	SZESDR0502BT1G
SZMM5Z2V4T1G	SZMM5Z47VT1G
SZMM5Z3V6T1G	
SZMM5Z4V3T1G	
SZMM5Z5V1ST1G	
SZMM5Z6V2T1G	
SZMM5Z9V1ST1G	
SZMM5Z9V1T1G	
SZESD5Z7.0T1G	
SZNZ9F2V4T5G	SZNZ9F20VT5G
SZNZ9F2V7ST5G	
SZNZ9F3V0T5G	
SZNZ9F3V9T5G	
SZNZ9F4V3ST5G	
SZNZ9F4V7ST5G	
SZNZ9F5V1T5G	
SZNZ9F5V6ST5G	
SZNZ9F6V2ST5G	
SZNZ9F6V2T5G	

Appendix A: Changed Products

Product	Customer Part Number	New Part Number	Qualification Vehicle
SESD9L3.3ST5G		NA	SESD9L3.3ST5G
SZESD7951ST5G		NA	SESD9L3.3ST5G
SZESD9C3.3ST5G		NA	SESD9L3.3ST5G
SZESDR0502BT1G		NA	SZESDR0502BT1G
SZMM5Z2V4T1G		NA	SZMM5Z47VT1G
SZMM5Z3V6T1G		NA	SZMM5Z47VT1G
SZMM5Z4V3T1G		NA	SZMM5Z47VT1G
SZMM5Z5V1ST1G		NA	SZMM5Z47VT1G
SZMM5Z6V2T1G		NA	SZMM5Z47VT1G
SZMM5Z9V1ST1G		NA	SZMM5Z47VT1G
SZMM5Z9V1T1G		NA	SZMM5Z47VT1G
SZNZ9F2V4T5G		NA	SZNZ9F20VT5G
SZNZ9F2V7ST5G		NA	SZNZ9F20VT5G
SZNZ9F3V0T5G		NA	SZNZ9F20VT5G
SZNZ9F3V9T5G		NA	SZNZ9F20VT5G
SZNZ9F4V3ST5G		NA	SZNZ9F20VT5G
SZNZ9F4V7ST5G		NA	SZNZ9F20VT5G
SZNZ9F5V1T5G		NA	SZNZ9F20VT5G
SZNZ9F5V6ST5G		NA	SZNZ9F20VT5G
SZNZ9F6V2ST5G		NA	SZNZ9F20VT5G
SZNZ9F6V2T5G		NA	SZNZ9F20VT5G