



Title of Change:	Transfer of wafer fabrication operations for ON Semiconductor Zener products to ON Niigata, Japan. Change to AlSiCu top metal, Cu wire and Henkel mold compound.
Proposed Changed Material First Ship Date:	30 August 2019
Current Material Last Order Date:	7 July 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:	7 July 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 <Hiroshi.Koizumi@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.
Additional Reliability Data:	Contact your local ON Semiconductor Sales Office or < Nicky.Siu@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 – Wafer Production	New / change of metallization (specifically chip frontside)" Move of all or part of wafer fab to a different location/site/subcontractor (qualification of an additional manufacturing site)
Process – Assembly	Change of wire bonding Change of mold compound

Description and Purpose:

This is the Initial Notification by ON Semiconductor notifying customers of its plan to transfer fab site from ISMF(Malaysia) to Niigata(Japan) as qualified wafer source for NZener, and change to 2um AlSiCu top metal, Cu wire, and Henkel mold compound.

Niigata Fab facility is an ON Semiconductor owned wafer fab that has been producing products for ON Semiconductor. Several existing technologies within ON Semiconductor’s product families are currently sourced from Niigata Fab. ON Semiconductor Niigata Wafer Fab is an internal factory that is ISO/TS16949 and ISO-9001 certified.

Material to be changed	Before Change Description	After Change Description
Wafer fab	ON Semiconductor ISMF FAB, Malaysia	ON Semiconductor Niigata, Japan
Top metal	AlSi 2um	AlSiCu 2um
Mold Compound	Hitachi GE200F	Henkel GR640 HV
Wire	Au 0.8mils/Cu 0.8mils	Cu 0.8mils

There is no product marking change as a result of this change



Reason / Motivation for Change:	<ul style="list-style-type: none"> - Change benefits for customer: <ul style="list-style-type: none"> • unconstraint capacity - Risk for late release for customer <ul style="list-style-type: none"> • No ISMF supply after Proposed Changed Material First Ship Date • Limited ability to support bridge build availability. 																																						
Anticipated impact on fit, form, function, reliability, product safety or manufacturability:	<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>																																						
Sites Affected:	ON Semiconductor Sites: ON ISMF, Malaysia ON Leshan, China ON Niigata, Japan	External Foundry/Subcon Sites: None																																					
Marking of Parts/ Traceability of Change:	Affected devices from ON Semiconductor with date code First Ship Date and greater is sourced from ON Semiconductor Niigata, Japan.																																						
Reliability Data Summary:																																							
QV DEVICE NAME <u>SZMMBZ5270BLT1G</u>																																							
PACKAGE: <u>SOT23</u>																																							
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #92d050;"> <th style="text-align: left;">Test</th> <th style="text-align: left;">Specification</th> <th style="text-align: left;">Condition</th> <th style="text-align: left;">Interval</th> </tr> </thead> <tbody> <tr> <td>SSOP (SSOL)</td> <td>AEC-Q101-REV-D1 (JESD22-A108)</td> <td>Iz max, Ta to rated Tj=150°C</td> <td>2016hrs</td> </tr> <tr> <td>HTSL</td> <td>JESD22-A103</td> <td>Ta= 150°C</td> <td>2016hrs</td> </tr> <tr> <td>IOL</td> <td>MIL-STD-750 (M1037) AEC-Q101</td> <td>Ta=+25°C, delta Tj=100°C On/off = 2 min</td> <td>30000 cyc</td> </tr> <tr> <td>TC</td> <td>JESD22-A104</td> <td>Temp = -55°C to +150°C</td> <td>1000 cycles</td> </tr> <tr> <td>HAST</td> <td>JESD22-A110</td> <td>Temp = 130°C, 85% RH, ~ 18.8 psig, bias = 80% of rated V</td> <td>192hrs</td> </tr> <tr> <td>uHAST</td> <td>JESD22-A118</td> <td>130°C, 85% RH, 18.8psig, unbiased</td> <td>96hrs</td> </tr> <tr> <td>PC</td> <td>J-STD-020 JESD-A113</td> <td>MSL 1 @260°C</td> <td></td> </tr> <tr> <td>RSH</td> <td>JESD22- B106</td> <td>Ta = 265C, 10 sec</td> <td></td> </tr> </tbody> </table>	Test	Specification	Condition	Interval	SSOP (SSOL)	AEC-Q101-REV-D1 (JESD22-A108)	Iz max, Ta to rated Tj=150°C	2016hrs	HTSL	JESD22-A103	Ta= 150°C	2016hrs	IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	30000 cyc	TC	JESD22-A104	Temp = -55°C to +150°C	1000 cycles	HAST	JESD22-A110	Temp = 130°C, 85% RH, ~ 18.8 psig, bias = 80% of rated V	192hrs	uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96hrs	PC	J-STD-020 JESD-A113	MSL 1 @260°C		RSH	JESD22- B106	Ta = 265C, 10 sec				
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Electrical Characteristic Summary:																																							
Electrical characteristics will be performed and updated per FPCN.																																							



List of Affected Parts:		
Current Part Number	New Part Number	Qualification Vehicle
SMMSZ5260BT1G	NA	SZMMSZ5272BT1G
SZMMSZ4714T1G	NA	SZMMSZ5272BT1G
SZMMSZ5256CT1G	NA	SZMMSZ5272BT1G
SMMSZ5256BT1G	NA	SZMMSZ5272BT1G
SMMSZ4713T1G	NA	SZMMSZ5272BT1G
SZMMSZ5254ET1G	NA	SZMMSZ5272BT1G
SZMMSZ4711T3G	NA	SZMMSZ5272BT1G
SMMSZ5254BT1G	NA	SZMMSZ5272BT1G
SMMSZ4711T1G	NA	SZMMSZ5272BT1G
SZMMSZ5252CT1G	NA	SZMMSZ5272BT1G
SMMSZ5252ET1G	NA	SZMMSZ5272BT1G
SMMSZ5252BT1G	NA	SZMMSZ5272BT1G
SZMMSZ5250CT1G	NA	SZMMSZ5272BT1G
SZMMSZ5250BT1G	NA	SZMMSZ5272BT1G
SZMMSZ5250ET1G	NA	SZMMSZ5272BT1G
SZMMSZ5249BT1G	NA	SZMMSZ5272BT1G
SZMMSZ5248BT1G	NA	SZMMSZ5272BT1G
SZMMSZ5248CT1G	NA	SZMMSZ5272BT1G
SMMSZ4704T1G	NA	SZMMSZ5272BT1G
SZMMSZ5245CT1G	NA	SZMMSZ5272BT1G
SZMMSZ5244ET1G	NA	SZMMSZ5272BT1G
SZMMSZ4701ET1G	NA	SZMMSZ5272BT1G
SMMSZ4701T1G	NA	SZMMSZ5272BT1G
SZMMSZ5243BT1G	NA	SZMMSZ5272BT1G
SZMMSZ5242ET1G	NA	SZMMSZ5272BT1G
SMMSZ4698T1G	NA	SZMMSZ5272BT1G
SZMMSZ4698T1G	NA	SZMMSZ5272BT1G
SZBZX84C75ET1G	NA	SZMMBZ5270BLT1G
SZBZX84C62ET1G	NA	SZMMBZ5270BLT1G
SZMMBZ5264BLT1G	NA	SZMMBZ5270BLT1G
SZMMBZ5263ELT1G	NA	SZMMBZ5270BLT1G
SZBZX84C56LT1G	NA	SZMMBZ5270BLT1G
SZBZX84C56ET1G	NA	SZMMBZ5270BLT1G
SZMMBZ5262BLT1G	NA	SZMMBZ5270BLT1G
SZBZX84C51LT1G	NA	SZMMBZ5270BLT1G



SZBZX84C51ET1G	NA	SZMMBZ5270BLT1G
SZMMBZ5261ELT1G	NA	SZMMBZ5270BLT1G
SZBZX84C47ET1G	NA	SZMMBZ5270BLT1G
SZBZX84C43ET1G	NA	SZMMBZ5270BLT1G
SZMMBZ5259BLT1G	NA	SZMMBZ5270BLT1G
SZBZX84C39LT3G	NA	SZMMBZ5270BLT1G
SZBZX84C39LT1G	NA	SZMMBZ5270BLT1G
SZBZX84C39ET1G	NA	SZMMBZ5270BLT1G
SZBZX84C36LT3G	NA	SZMMBZ5270BLT1G
SZBZX84C36LT1G	NA	SZMMBZ5270BLT1G
SZBZX84C33ET1G	NA	SZMMBZ5270BLT1G
SZMMBZ5257ELT1G	NA	SZMMBZ5270BLT1G
SZBZX84C33ET3G	NA	SZMMBZ5270BLT1G
SZMMBZ5256BLT1G	NA	SZMMBZ5270BLT1G
SZBZX84C30LT1G	NA	SZMMBZ5270BLT1G
SZMMBZ5254BLT1G	NA	SZMMBZ5270BLT1G
SZBZX84C27LT3G	NA	SZMMBZ5270BLT1G
SZBZX84C27LT1G	NA	SZMMBZ5270BLT1G
SZMMBZ5253BLT1G	NA	SZMMBZ5270BLT1G
SZMMBZ5252ELT1G	NA	SZMMBZ5270BLT1G
SZBZX84C24ET1G	NA	SZMMBZ5270BLT1G
SZMMBZ5250ELT1G	NA	SZMMBZ5270BLT1G
SZMMBZ5249BLT1G	NA	SZMMBZ5270BLT1G
SZBZX84C18LT1G	NA	SZMMBZ5270BLT1G
SZMMBZ5248BLT3G	NA	SZMMBZ5270BLT1G
SZMMBZ5248BLT1G	NA	SZMMBZ5270BLT1G
SZBZX84C18LT3G	NA	SZMMBZ5270BLT1G
SZBZX84C13LT3G	NA	SZMMBZ5270BLT1G
SZBZX84C13LT1G	NA	SZMMBZ5270BLT1G
SZMMBZ5241BLT1G	NA	SZMMBZ5270BLT1G
SZBZX84C11LT3G	NA	SZMMBZ5270BLT1G
SZBZX84C11LT1G	NA	SZMMBZ5270BLT1G



Appendix A: Changed Products

Product	Customer Part Number	New Part Number	Qualification Vehicle
SMMSZ4698T1G		NA	SZMMSZ5272BT1G
SMMSZ4701T1G		NA	SZMMSZ5272BT1G
SMMSZ4704T1G		NA	SZMMSZ5272BT1G
SMMSZ4711T1G		NA	SZMMSZ5272BT1G
SMMSZ4713T1G		NA	SZMMSZ5272BT1G
SMMSZ5252BT1G		NA	SZMMSZ5272BT1G
SMMSZ5252ET1G		NA	SZMMSZ5272BT1G
SMMSZ5254BT1G		NA	SZMMSZ5272BT1G
SMMSZ5256BT1G		NA	SZMMSZ5272BT1G
SMMSZ5260BT1G		NA	SZMMSZ5272BT1G
SZBZX84C11LT1G		NA	SZMMBZ5270BLT1G
SZBZX84C11LT3G		NA	SZMMBZ5270BLT1G
SZBZX84C13LT1G		NA	SZMMBZ5270BLT1G
SZBZX84C13LT3G		NA	SZMMBZ5270BLT1G
SZBZX84C18LT1G		NA	SZMMBZ5270BLT1G
SZBZX84C18LT3G		NA	SZMMBZ5270BLT1G
SZBZX84C24ET1G		NA	SZMMBZ5270BLT1G
SZBZX84C27LT1G		NA	SZMMBZ5270BLT1G
SZBZX84C27LT3G		NA	SZMMBZ5270BLT1G
SZBZX84C30LT1G		NA	SZMMBZ5270BLT1G
SZBZX84C33ET1G		NA	SZMMBZ5270BLT1G
SZBZX84C33ET3G		NA	SZMMBZ5270BLT1G
SZBZX84C36LT1G		NA	SZMMBZ5270BLT1G
SZBZX84C36LT3G		NA	SZMMBZ5270BLT1G
SZBZX84C39ET1G		NA	SZMMBZ5270BLT1G
SZBZX84C39LT1G		NA	SZMMBZ5270BLT1G
SZBZX84C39LT3G		NA	SZMMBZ5270BLT1G
SZBZX84C43ET1G		NA	SZMMBZ5270BLT1G
SZBZX84C47ET1G		NA	SZMMBZ5270BLT1G
SZBZX84C51ET1G		NA	SZMMBZ5270BLT1G
SZBZX84C51LT1G		NA	SZMMBZ5270BLT1G
SZBZX84C56ET1G		NA	SZMMBZ5270BLT1G
SZBZX84C56LT1G		NA	SZMMBZ5270BLT1G
SZBZX84C62ET1G		NA	SZMMBZ5270BLT1G
SZBZX84C75ET1G		NA	SZMMBZ5270BLT1G
SZMMBZ5241BLT1G		NA	SZMMBZ5270BLT1G
SZMMBZ5248BLT1G		NA	SZMMBZ5270BLT1G
SZMMBZ5248BLT3G		NA	SZMMBZ5270BLT1G
SZMMBZ5249BLT1G		NA	SZMMBZ5270BLT1G
SZMMBZ5250ELT1G		NA	SZMMBZ5270BLT1G
SZMMBZ5252ELT1G		NA	SZMMBZ5270BLT1G
SZMMBZ5253BLT1G		NA	SZMMBZ5270BLT1G
SZMMBZ5254BLT1G		NA	SZMMBZ5270BLT1G
SZMMBZ5256BLT1G		NA	SZMMBZ5270BLT1G
SZMMBZ5257ELT1G		NA	SZMMBZ5270BLT1G
SZMMBZ5259BLT1G		NA	SZMMBZ5270BLT1G
SZMMBZ5261ELT1G		NA	SZMMBZ5270BLT1G
SZMMBZ5262BLT1G		NA	SZMMBZ5270BLT1G
SZMMBZ5263ELT1G		NA	SZMMBZ5270BLT1G
SZMMBZ5264BLT1G		NA	SZMMBZ5270BLT1G
SZMMSZ4698T1G		NA	SZMMSZ5272BT1G
SZMMSZ4701ET1G		NA	SZMMSZ5272BT1G
SZMMSZ4711T3G		NA	SZMMSZ5272BT1G
SZMMSZ4714T1G		NA	SZMMSZ5272BT1G
SZMMSZ5242ET1G		NA	SZMMSZ5272BT1G
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SZMMSZ5244ET1G		NA	SZMMSZ5272BT1G
SZMMSZ5248BT1G		NA	SZMMSZ5272BT1G
SZMMSZ5249BT1G		NA	SZMMSZ5272BT1G



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SZMMSZ5250ET1G		NA	SZMMSZ5272BT1G
SZMMSZ5254ET1G		NA	SZMMSZ5272BT1G