ON Semiconductor®

Final Product/Process Change Notification

Document # : FPCN21630Z
Issue Date: 24 February 2017

Title of Change:	Wire conversion from 2mils Au wire to 2mils bare Cu wire for SOD323 devices
Proposed Changed Material First Ship Date:	24 February 2018
Current Material Last Order Date:	1 January 2018 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:	31 January 2018 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 <Harry.Tian@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:	15 March 2017
PPAP Availability Date:	15 March 2017
Additional Reliability Data	Contact your local ON Semiconductor Sales Office or Zhang Rui <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	**Type of Change**
Process – Assembly	Change of wire bonding

Description and Purpose:
ON Semiconductor is notifying customers of its use of 2mils bare Cu wire for SOD323 devices at ON Semiconductor's Leshan, China facility.

Upon the expiration of this PCN, these devices will be built with 2mils bare Cu wire at the same site. Datasheet specifications and product electrical performance remain unchanged. Reliability Qualification and full electrical characterization over temperature has been performed.

Material to be changed	Before Change Description	After Change Description
Bonding material	2mils Au wire	2mils Cu 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 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:

☐ All site(s) ☐ not applicable ☐ ON Semiconductor site(s) : *ON Leshan, China* ☐ External Foundry/Subcon site(s)

Marking of Parts/ Traceability of Change:	Products assembled with 2mils bare Cu Wire from the ON Semiconductor facility will have a Finish Goods Date Code of WW05, 2018 or greater.

Reliability Data Summary:

PACKAGE: SOD323
NSR0320MW2T3G

Test	Specification	Condition	Interval	Results
HTRB	JESD22-A108	Ta=150°C, 100% max rated V	2016hrs	0/252
HTSL	JESD22-A103	Ta= 150°C	2016 hrs	0/273
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	30k cyc	0/252
TC	JESD22-A104	Ta= -65°C to +150°C	2000cyc	0/378
H3TRB	JESD22-A101	85°C, 85% RH, V=80% rated V or 100V max	2016hrs	0/315
PC	J-STD-020 JESD-A113	MSL 1 @ 125°C	-	0/1197
RSH	JESD22- B106	Ta = 265C, 10 sec	-	0/90

FPCN21630Z AEC 1 Pager.pdf

NOTE: See Attached AEC 1 Pager.

To access file attachments on pdf copy of PCN, please be guided by the steps below:

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 Standard Parts:

Current Part Number	New Part Number	Qualification Vehicle
NSVR0320MW2T1G	NSVR0320MW2T1G	NSR0320MW2T3G
NSVR1020MW2T1G	NSVR1020MW2T1G	NSR0320MW2T3G