



Final Product/Process Change Notification

Document #: FPCN24793Z

Issue Date: 14 Dec 2022

Title of Change:	Wafer top metal change and Au to Cu wire conversion for SOD123 CCR Parts.	
Proposed Changed Material First Ship Date:	29 Jun 2023 or earlier if approved by customer	
Current Material Last Order Date:	29 Mar 2023 <i>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.</i>	
Current Material Last Delivery Date:	28 Jun 2023 <i>The Current Material Last Delivery Date may be subject to change based on build and depletion of the current (unchanged) material inventory</i>	
Product Category:	Active components – Discrete components	
Contact information:	Contact your local onsemi Sales Office or Jonney.Hu@onsemi.com	
PCN Samples Contact:	Contact your local onsemi Sales Office to place sample order. 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:	15 Feb 2023	
PPAP Availability Date:	15 Feb 2023	
Additional Reliability Data:	Contact your local onsemi Sales Office or ChangKit.Mok@onsemi.com	
Type of Notification:	This is a Final Product/Process Change Notification (FPCN) sent to customers. The change will be implemented at 'Proposed Change Material First Ship Date' in compliance to J-STD-46 or ZVEI, or earlier upon customer approval, or per our signed agreements. onsemi 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	
Bare Die	New / change of frontside metallization	
Process - Assembly	Change of wire bonding	
Description and Purpose:		
onsemi is notifying customers of its use of 0.8 mil pd doped Cu wire for SOD123 CCR (Constant Current Regulator) parts at onsemi Leshan, China facility ,while changing the wafer top metal from 15KA AlCu to 20KA AlCu.		
Upon the expiration of this PCN, these devices will be built with 0.8 mil pd doped 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		
	From	To
Bond Wire	0.8 mil Au wire	0.8mil pd doped Cu wire
Wafer top metal	15KA AlCu	20KA AlCu

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 onsemi in relation to the PCN, associated risks are verified and excluded. No anticipated impacts.			
Sites Affected:				
onsemi Sites		External Foundry/Subcon Sites		
onsemi Leshan, China		None		
onsemi Roznov, Czech Republic				
Marking of Parts/ Traceability of Change:	Changed material will be identified by date code.			
Reliability Data Summary:				
QV DEVICE NAME: NSV45030AT1G RMS: L85786 PACKAGE: SOD123				
Test	Specification	Condition	Interval	Results
HTOL	JESD22-A108	Ta= 125°C, 100% max rated V	1008 hrs	0/231
HTSL	JESD22-A103	Ta= 150°C	2016 hrs	0/231
PC	J-STD-020 JESD-A113	MSL 1 @ 260°C, Pre TC, uHAST, HAST for surface mount pkgs only		0/693
TC	JESD22-A104	Ta= -65°C to +150°C	1000 cyc	0/231
HAST	JESD22-A110	130°C, 85% RH, 18.8psig, bias	192 hrs	0/231
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/231
RSH	JESD22- B106	Ta = 265°C, 10 sec Required for through hole devices only		0/30
SD	JSTD002	Ta = 245°C, 5 sec		0/30
NOTE: AEC-1pager is attached. <i>To view attachments:</i> 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.				
Electrical Characteristics Summary:				
Three temperature characterization and ESD performance has been performed, Electrical characterization result is available upon request.				



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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
NSV45015WT1G	N/A	NSV45030AT1G
NSV45020AT1G	N/A	NSV45030AT1G
NSV45020T1G	N/A	NSV45030AT1G
NSV45025T1G	N/A	NSV45030AT1G
NSV45030AT1G	N/A	NSV45030AT1G
NSV45030T1G	N/A	NSV45030AT1G
NSV50010YT1G	N/A	NSV45030AT1G
NSV45025AT1G	N/A	NSV45030AT1G