



Final Product/Process Change Notification

Document #:FPCN20930ZF

Issue Date:30 Jun 2022

Title of Change:	Qualification of Power Schottky Top Metal And Back Metal Change with Die Shrink for SMC Package.	
Proposed Changed Material First Ship Date:	15 Jun 2023 or earlier if approved by customer	
Current Material Last Order Date:	15 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:	14 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 Danh.Trinh@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 Dec 2022	
PPAP Availability Date:	15 Oct 2022	
Additional Reliability Data:	Contact your local onsemi Sales Office or CheanChing.Sim@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	
Design	Die Shrink	
Bare Die	New / change of backside metallization, New / change of frontside metallization	
Description and Purpose:		
This is a Final Product Change Notification announcing to customer that onsemi has qualified Power Schottky top metal and back metal change with die shrink on selected automotive qualified Orderable Part Numbers (OPNs) listed in this FPCN.		
Item	From	To
Die top metal composition	TiW/NiV/Au	TiW/NiV/Ag
Die back metal composition	Cr/Ni/Au	Ti/Ni/Ag
Die P Guard Ring shrink	4 mils	1 mil
The change will affect to Schottky SMC Package at its assembly sites.		
Products listed in this FPCN have successfully passed reliability testing as per automotive requirements.		
There is no product marking change as a result of this change.		

Reason / Motivation for Change:	Process/Materials Change			
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 onsemi in relation to the PCN, associated risks are verified and excluded.</p> <p>No anticipated impacts.</p>			
Sites Affected:				
onsemi Sites			External Foundry/Subcon Sites	
onsemi, ISMF Malaysia			None	
Marking of Parts/ Traceability of Change:	Clean date code will be advised upon of request.			
Reliability Data Summary:				
QV DEVICE NAME: NRVBS360T3G (Schottky Rectifier) RMS: V79612 PACKAGE: SMC				
Test	Specification	Condition	Interval	Result
HTSL	JESD22-A103	Ta = 175 °C	1008 hrs	0/231
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta = +25°C, deltaTj = 100°C max, Ton = Toff = 2min	15000 cyc	0/231
TC	JESD22-A104	Ta = -65°C to +150°C	1000 cyc	0/231
AC	JESD22-A102	121°C, 100% RH, 15psig, unbiased	96 hrs	0/231
H3TRB	JESD22-A101	Ta = 85°C, RH = 85%, bias = 80% of rated V	1008 hrs	0/231
HTRB	JESD22-A108	Ta = 90 °C, bias = 100% of rated V	1008 hrs	0/231
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C		0/924
RSH	JESD22- B106	Ta = 265°C, 10 sec		0/90
SD	JSTD002	Ta = 245°C, 10 sec		0/45
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:				
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 <u>PCN Customized Portal</u> .				
Current Part Number	New Part Number	Qualification Vehicle		
NRVBS360T3G	N/A	NRVBS360T3G		