



Title of Change:	Qualify ON Semiconductor Vietnam (OSV) as an additional Automotive site for Assembly/Test of specified products in DPAK package.
Proposed Changed Material First Ship Date:	14 September 2017 <i>or earlier upon customer approval.</i>
Current Material Last Order Date:	N/A
Current Material Last Delivery Date:	N/A
Product Category:	<i>Active components – Discrete components</i>
Contact information	Contact your local ON Semiconductor Sales Office or <Phuong.Hoang@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:	1 March 2017
PPAP Availability Date:	1 April 2017
Additional Reliability Data:	Contact your local ON Semiconductor Sales Office or <cheanching.sim@onsemi.com>.
Type of Notification:	This is a Final Product/Process Change Notification (FPCN) sent to customers. This FPCN is being issued 6 months prior to implementation because this change provides an alternate source to an ON manufacturing facility utilizing the same BOM. ON Semiconductor will consider this proposed change and it's conditions acceptable, unless an inquiry is made in writing within 30 days of delivery of this notice. To do so, contact <PCN.Support@onsemi.com>.
Change Category:	Type of Change
Process – Assembly	Move of all or part of assembly to a different location/site/subcontractor.
Process – Assembly	Change of product marking.
Test Flow	Move of all or part of electrical wafer test and/or final test to a different location/site/subcontractor.
Equipment	Production from a new equipment/tool which uses the same basic technology (replacement equipment or extension of existing equipment pool) without change of process.
Description and Purpose:	
<p>This Final Notification announces the plan to qualify ON Semiconductor Vietnam (OSV) as an additional Assembly and Test site for operations of Automotive discrete DPAK packaged products.</p> <p>Upon the expiration of this FPCN, new OSV part numbers will be available to allow specified products to be sourced from either the Seremban or Vietnam locations using the same Bill of Material.</p> <p>ON Semiconductor Vietnam (OSV) is qualified site for DPAK Standard discrete packaged products and is ISO TS16949 certified.</p> <p>Products sourced from OSV have been qualified to Automotive requirements and continue remain as Pb-free, Halide free and RoHS compliant.</p>	



<p>Reason / Motivation for Change:</p>	<ul style="list-style-type: none"> • Change benefits for customer: <ul style="list-style-type: none"> ○ Unconstrained Automotive Sourcing ○ Seamless dual source Mfg alternatives, ensuring capacity availability ○ Instantaneous capacity available for growth; Short lead times; Lines down aversion • Risk for late release for customer: Limited capacity. 																																																							
<p>Anticipated impact on fit, form, function, reliability, product safety or manufacturability</p>	<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>																																																							
<p>Sites Affected:</p> <p> <input type="checkbox"/> All site(s) <input type="checkbox"/> not applicable <input checked="" type="checkbox"/> ON Semiconductor site(s) : <input type="checkbox"/> External Foundry/Subcon site(s) </p> <p style="margin-left: 150px;"> <i>ON Seremban, Malaysia</i> <i>ON Dong Nai Province, Vietnam</i> </p>																																																								
<p>Marking of Parts/ Traceability of Change:</p>	<p>Product from ON Semiconductor Vietnam (OSV) will be marked with site code "VN" prior to the date code while the Seremban device does not have site code marking.</p>																																																							
<p>Reliability Data Summary:</p> <p>QV DEVICE NAME: NVD5862NT4G (Mosfet) PACKAGE: DPAK</p> <table border="1" data-bbox="110 1129 1523 1703"> <thead> <tr style="background-color: #92d050;"> <th>Test</th> <th>Specification</th> <th>Condition</th> <th>Interval</th> <th>Result</th> </tr> </thead> <tbody> <tr> <td>HTRB</td> <td>JESD22-A108</td> <td>Ta = 175 °C, bias = 100% of rated V</td> <td>1008 hrs</td> <td>0/84</td> </tr> <tr> <td>HTGB</td> <td>JESD22-A108</td> <td>Ta = 175 °C, 100% max rated Vgss</td> <td>1008 hrs</td> <td>0/84</td> </tr> <tr> <td>HTSL</td> <td>JESD22-A103</td> <td>Ta = 175 °C</td> <td>1008 hrs</td> <td>0/84</td> </tr> <tr> <td>IOL</td> <td>MIL-STD-750 (M1037) AEC-Q101</td> <td>Ta=+25°C, deltaTj=100°C max, Ton = Toff = 2min</td> <td>15000 cyc</td> <td>0/84</td> </tr> <tr> <td>TC</td> <td>JESD22-A104</td> <td>Temp = -55°C to +150°C</td> <td>1000 cyc</td> <td>0/84</td> </tr> <tr> <td>AC</td> <td>JESD22-A102</td> <td>121°C, 100% RH, 15psig, unbiased</td> <td>96 hrs</td> <td>0/84</td> </tr> <tr> <td>H3TRB</td> <td>JESD22-A101</td> <td>Temp = 85°C, RH=85%, bias = 80% of rated V</td> <td>1008 hrs</td> <td>0/84</td> </tr> <tr> <td>PC</td> <td>J-STD-020 JESD-A113</td> <td>MSL 1 @ 260 °C</td> <td></td> <td>0/336</td> </tr> <tr> <td>RSH</td> <td>JESD22- B106</td> <td>Ta = 265°C, 10 sec</td> <td></td> <td>0/30</td> </tr> <tr> <td>SD</td> <td>JSTD002</td> <td>Ta = 245°C, 10 sec</td> <td></td> <td>0/15</td> </tr> </tbody> </table>		Test	Specification	Condition	Interval	Result	HTRB	JESD22-A108	Ta = 175 °C, bias = 100% of rated V	1008 hrs	0/84	HTGB	JESD22-A108	Ta = 175 °C, 100% max rated Vgss	1008 hrs	0/84	HTSL	JESD22-A103	Ta = 175 °C	1008 hrs	0/84	IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, deltaTj=100°C max, Ton = Toff = 2min	15000 cyc	0/84	TC	JESD22-A104	Temp = -55°C to +150°C	1000 cyc	0/84	AC	JESD22-A102	121°C, 100% RH, 15psig, unbiased	96 hrs	0/84	H3TRB	JESD22-A101	Temp = 85°C, RH=85%, bias = 80% of rated V	1008 hrs	0/84	PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C		0/336	RSH	JESD22- B106	Ta = 265°C, 10 sec		0/30	SD	JSTD002	Ta = 245°C, 10 sec		0/15
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QV DEVICE NAME: NVD5117PLT4G (Mosfet)

PACKAGE: DPAK

Test	Specification	Condition	Interval	Result
HTRB	JESD22-A108	Ta = 175 °C, bias = 100% of rated V	1008 hrs	0/84
HTGB	JESD22-A108	Ta = 175 °C, 100% max rated Vgss	1008 hrs	0/84
HTSL	JESD22-A103	Ta = 175 °C	1008 hrs	0/84
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, deltaTj=100°C max, Ton = Toff = 2min	15000 cyc	0/84
TC	JESD22-A104	Temp = -55°C to +150°C	1000 cyc	0/84
AC	JESD22-A102	121°C, 100% RH, 15psig, unbiased	96 hrs	0/84
H3TRB	JESD22-A101	Temp = 85°C, RH=85%, bias = 100V max	1008 hrs	0/84
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C		0/336
RSH	JESD22- B106	Ta = 265°C, 10 sec		0/30
SD	JSTD002	Ta = 245°C, 10 sec		0/15

QV DEVICE NAME: STD110N02RT4G (Mosfet)

PACKAGE: DPAK

Test	Specification	Condition	Interval	Result
HTRB	JESD22-A108	Ta = 175 °C, bias = 100% of rated V	1008 hrs	0/84
HTGB	JESD22-A108	Ta = 175 °C, 100% max rated Vgss	1008 hrs	0/84
HTSL	JESD22-A103	Ta = 175 °C	1008 hrs	0/84
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, deltaTj=100°C max, Ton = Toff = 2min	15000 cyc	0/84
TC	JESD22-A104	Temp = -55°C to +150°C	1000 cyc	0/84
AC	JESD22-A102	121°C, 100% RH, 15psig, unbiased	96 hrs	0/84
H3TRB	JESD22-A101	Temp = 85°C, RH=85%, bias = 100V max	1008 hrs	0/84
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C		0/336
RSH	JESD22- B106	Ta = 265°C, 10 sec		0/30
SD	JSTD002	Ta = 245°C, 10 sec		0/15

**NOTE: AEC-1pager is attached.**

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:

Electrical characteristics are not impacted.

List of Affected Standard Parts:

Current SBN Part Number	New OSV Part Number	Qualification Vehicle
NVD5484NLT4G	NVD5484NLT4G-VF01	NVD5862NT4G NVD5117PLT4G STD110N02RT4G
NVD3055-150T4G	NVD3055-150T4G-VF01	
NTDV20N06T4G	NTDV20N06T4G-VF01	
NVD5862NT4G	NVD5862NT4G-VF01	
NVD5863NLT4G	NVD5863NLT4G-VF01	
NVD6828NLT4G	NVD6828NLT4G-VF01	
NVD4810NT4G	NVD4810NT4G-VF01	
NVD4856NT4G	NVD4856NT4G-VF01	
NVD5117PLT4G	NVD5117PLT4G-VF01	
NVD6820NLT4G	NVD6820NLT4G-VF01	
NVD5802NT4G	NVD5802NT4G-VF01	
NVD5805NT4G	NVD5805NT4G-VF01	
NVD5807NT4G	NVD5807NT4G-VF01	
NVD4806NT4G	NVD4806NT4G-VF01	
NVD5890NT4G	NVD5890NT4G-VF01	