



Title of Change:	Qualification of VHVIC (Very High Voltage IC) Technology at AFSM (Aizu Fujitsu Semiconductor Manufacturing) Japan – Phase 1																																						
Proposed first ship date:	17 July 2017																																						
Contact information:	Contact your local ON Semiconductor Sales Office or <scott.brow@onsemi.com>																																						
Samples:	Contact your local ON Semiconductor Sales Office or <scott.brow@onsemi.com>																																						
Additional Reliability Data:	Contact your local ON Semiconductor Sales Office or <ken.fergus@onsemi.com>.																																						
Type of notification:	This is a Final Product/Process Change Notification (FPCN) sent to customers. FPCNs are issued 90 days prior to implementation of the change. ON Semiconductor will consider this change accepted, unless an inquiry is made in writing within 30 days of delivery of this notice. To do so, contact <PCN.Support@onsemi.com>.																																						
Change Part Identification:	Product will be identified by having a date code of 1724 or newer. As material from different FABs cannot be combined in to (1) reel, product from AFSM will show CS: JP (CS = Custom Source) on the label of the reel and box. Please see sample MPN on page 2 at the following link http://www.onsemi.com/pub_link/Collateral/LABELRM-D.PDF to see the location of the CS identifier.																																						
Change category:	<input checked="" type="checkbox"/> Wafer Fab Change <input type="checkbox"/> Assembly Change <input type="checkbox"/> Test Change <input type="checkbox"/> Other _____																																						
Change Sub-Category(s):	<input checked="" type="checkbox"/> Manufacturing Site Change/Addition <input type="checkbox"/> Manufacturing Process Change <input type="checkbox"/> Material Change <input type="checkbox"/> Product specific change <input type="checkbox"/> Datasheet/Product Doc change <input type="checkbox"/> Shipping/Packaging/Marking <input type="checkbox"/> Other: _____																																						
Sites Affected:	<input type="checkbox"/> All site(s) <input type="checkbox"/> not applicable <input type="checkbox"/> ON Semiconductor site(s) : <input checked="" type="checkbox"/> External Foundry/Subcon site(s) Aizu Fujitsu Semiconductor Manufacturing																																						
Description and Purpose:	<p>ON Semiconductor would like to inform our customers that we have qualified our Very High Voltage IC (VHVIC) technology at the AFSM (Aizu Fujitsu Semiconductor Manufacturing) FAB in Aizu, Japan. This qualification enables expanded capacity for this technology.</p> <p>All products listed in this FPCN may be dual sourced from its current ON Semiconductor wafer fab in Gresham and AFSM. This is Phase 1 of the qualification and transfer. Subsequent FPCN's will be submitted for additional product releases in the coming months.</p>																																						
Reliability Data Summary:	<p>QV DEVICE NAME: NCP1236BD65R2G PACKAGE: SOIC 8 (Less Pin 7)</p> <table border="1"> <thead> <tr> <th>Test</th> <th>Specification</th> <th>Condition</th> <th>Interval</th> <th>Results</th> </tr> </thead> <tbody> <tr> <td>HTOL</td> <td>JESD22-A108</td> <td>Ta=125°C, 500V</td> <td>1000 hrs</td> <td>0/231</td> </tr> <tr> <td>HTSL</td> <td>JESD22-A103</td> <td>Ta= 150°C</td> <td>1000 hrs</td> <td>0/231</td> </tr> <tr> <td>PC-TC</td> <td>JESD22-A104</td> <td>Ta= -65°C to +150°C</td> <td>500 cyc</td> <td>0/231</td> </tr> <tr> <td>HAST</td> <td>JESD22-A110</td> <td>130°C, 85% RH, 18.8psig, bias</td> <td>96 hrs</td> <td>0/231</td> </tr> <tr> <td>PC-uHAST</td> <td>JESD22-A118</td> <td>130°C, 85% RH, 18.8psig, unbiased</td> <td>96 hrs</td> <td>0/231</td> </tr> <tr> <td>PC</td> <td>J-STD-020 JESD-A113</td> <td>MSL 1 @ 260 °C</td> <td></td> <td>0/693</td> </tr> </tbody> </table>				Test	Specification	Condition	Interval	Results	HTOL	JESD22-A108	Ta=125°C, 500V	1000 hrs	0/231	HTSL	JESD22-A103	Ta= 150°C	1000 hrs	0/231	PC-TC	JESD22-A104	Ta= -65°C to +150°C	500 cyc	0/231	HAST	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hrs	0/231	PC-uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/231	PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C		0/693
Test	Specification	Condition	Interval	Results																																			
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PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C		0/693																																			



QV DEVICE NAME: NCP1396ADR2G

PACKAGE: SOIC-16

Test	Specification	Condition	Interval	Results
HTOL	JESD22-A108	Ta=125°C, 600V	1000 hrs	0/231
HTSL	JESD22-A103	Ta= 150°C	1000 hrs	0/231
PC-TC	JESD22-A104	Ta= -65°C to +150°C	500 cyc	0/231
HAST	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hrs	0/231
PC-uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/231
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C		0/693

QV DEVICE NAME: NCP1399AADR2G

PACKAGE: SOIC-16

Test	Specification	Condition	Interval	Results
HTOL	JESD22-A108	Ta=125°C, 600V	1000 hrs	0/77

QV DEVICE NAME: NCP1615C3DR2G

PACKAGE: SOIC-16 (Less Pin 15)

Test	Specification	Condition	Interval	Results
HTOL	JESD22-A108	Ta=125°C, 700V	1000 hrs	0/77

QV DEVICE NAME: NCP1380BDR2G

PACKAGE: SOIC-8

Test	Specification	Condition	Interval	Results
HTOL	JESD22-A108	Ta=125°C, 30V	1000 hrs	0/77

QV DEVICE NAME: NCP4304ADR2G

PACKAGE: SOIC-8

Test	Specification	Condition	Interval	Results
HTOL	JESD22-A108	Ta=125°C, 200V	1000 hrs	0/231
HTSL	JESD22-A103	Ta= 150°C	1000 hrs	0/231
PC-TC	JESD22-A104	Ta= -65°C to +150°C	500 cyc	0/231
HAST	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hrs	0/231
PC-uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/231
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C		0/693



Electrical Characteristic Summary:

As the process was copied and matched from the sending FAB, electrical characteristics are not impacted by this change. Characterization reports available upon request

List of Affected Standard Parts:

Part Number	Qualification Vehicle
NCL30000DR2G	NCP1380ADR2G
NCL30002DR2G	
NCP1252ADR2G	
NCP1252APG	
NCP1252BDR2G	
NCP1252CDR2G	
NCP1252DDR2G	
NCP1252EDR2G	
NCP1379DR2G	
NCP1380ADR2G	
NCP1380BDR2G	
NCP1380CDR2G	
NCP1380DDR2G	
NCP1607BDR2G	
NCP1608BDR2G	
NCP1234AD100R2G	NCP1236BD65R2G
NCP1234AD65R2G	
NCP1234BD100R2G	
NCP1234BD65R2G	
NCP1236AD100R2G	
NCP1236AD65R2G	
NCP1236BD100R2G	
NCP1236BD65R2G	
NCP1246AD065R2G	
NCP1246AD100R2G	
NCP1246ALD065R2G	
NCP1246ALD100R2G	
NCP1246BD065R2G	
NCP1246BD100R2G	
NCP1246BLD065R2G	
NCP1246BLD100R2G	
NCP1336ADR2G	NCP1396ADR2G
NCP1336BDR2G	
NCP1396ADR2G	
NCP1396BDR2G	



NCP1399AADR2G	NCP1399AADR2G
NCP1399ACDR2G	
NCP1399AFDR2G	
NCP1399AGDR2G	
NCP1399AHDR2G	
NCP1399AIDR2G	
NCP1399AMDR2G	
NCP1399BADR2G	
NCP1615A1DR2G	NCP1615ADR2G
NCP1615ADR2G	
NCP1615C2DR2G	
NCP1615C3DR2G	
NCP1615C4DR2G	
NCP1615C5DR2G	
NCP1615CDR2G	
NCP1615D2DR2G	
NCP1615DDR2G	NCP4304ADR2G
NCP4304ADR2G	
NCP4304AMNTWG	
NCP4304BDR2G	
NCP4304BMNTWG	