Final Product/Process Change Notification

Document #:FPCN25188Z1
Issue Date:12 Dec 2024

Title of Change:	Update to **FPCN25188Z** - To inform customers of change to dual source strategy for Assembly and Test
Proposed Changed Material First Ship Date:	19 Mar 2025 or earlier if approved by customer
Current Material Last Order Date:	N/A *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:	N/A *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 – Integrated circuits
Contact information:	Contact your local onsemi Sales Office
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:	03 Feb 2025
PPAP Availability Date:	09 Dec 2024
Additional Reliability Data:	Contact your local onsemi Sales Office
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**
Test Flow	Move of all or part of electrical wafer test and/or final test to a different location/site/subcontractor
Equipment	Change in final test equipment type that uses a different technology, Production from a new equipment/tool which uses the same basic technology (replacement equipment or extension of existing equipment pool) without change of process.
Process - Assembly	Move of all or part of assembly to a different location/site/subcontractor., Change of mold compound, Die attach material

Description and Purpose:

This FPCN update is to notify customers that onsemi will adopt a dual source strategy for the DPAK packages (Case Outline 369C) listed in this FPCN.

This FPCN also corrects a typo in the die attach listed for JCET in the previous FPCN25188Z, where die attach was incorrectly stated as 92.5%PB,2.5%Sn,5%Ag. The corrected die attach is provided in the table below.

	From	To	
Assembly Site	onsemi, Vietnam	onsemi, Vietnam	JCET, China
Die Attach	Pb95Sn5	Pb95Sn5	92.5%Pb,5%Sn,2.5%Ag
Mold Compound	G700HF	G700HF	CEL-9240HF10
Final Test Site	onsemi, Vietnam	onsemi, Vietnam	JCET, China
Final Test Equipment	Tesec 881A	Tesec 881A	STS8203

	Old JCET Die Attach	Correct JCET Die Attach
Die Attach	92.5%Pb,2.5%Sn,5%Ag	92.5%Pb,5%Sn,2.5%Ag

There is no product marking change as a result of this change.

Reason / Motivation for Change:	Capacity improvement
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**
None	JCET, China

Marking of Parts/ Traceability of Change:	Traceable by Date Code and Assembly marking

Reliability Data Summary:

QV DEVICE NAME : NCV8401ADTRKG
RMS: S85946, S86124
PACKAGE: DPAK

Test	Specification	Condition	Interval	Results
Early Life Failure Rate	JESD22-A108	Ta=125°C, 100 % max rated Vcc	48 hrs	0/1200
High Temperature Reverse Bias	JESD22-A108	Ta=150°C, 100% max rated V	1008 hrs	0/231
High Temperature Operating Life	JESD22-A108	Ta=125°C, 100 % max rated Vcc	1008 hrs	0/231
High Temperature Storage Life	JESD22-A103	Ta= 150°C	1008 hrs	0/231
Preconditioning	J-STD-020 JESD-A113	MSL 1 @ 260 °C, Pre IOL, TC, uHAST, HAST, PTC for surface mount pkgs only		0/1155
Intermittent Operating Life	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	15000 cyc	0/231
Power Temperature Cycling	JESD22-A105	-40°C to 125°C	1000 cyc	0/231
Temperature Cycling	JESD22-A104	Ta= -55°C to +150°C, mount on board	1000 cyc	0/231
Highly Accelerated Stress Test	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hrs	0/231
Unbiased Highly Accelerated Stress Test	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/231
Resistance to Solder Heat	JESD22- B106	Ta = 265°C, 10 sec Required for through hole devices only		0/90
Solderability	JSTD002	Ta = 245°C, 5 sec		0/45
Physical Dimensions	JESD22-B120			0/30

QV DEVICE NAME : NCV8406ADTRKG
RMS: S86020
PACKAGE: DPAK

Test	Specification	Condition	Interval	Results
High Temperature Storage Life	JESD22-A103	Ta= 150°C	1008 hrs	0/231
Preconditioning	J-STD-020 JESD-A113	MSL 1 @ 260 °C, Pre TC, uHAST for surface mount pkgs only		0/462
Temperature Cycling	JESD22-A104	Ta= -55°C to +150°C, mount on board	1000 cyc	0/231
Unbiased Highly Accelerated Stress Test	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/231
Resistance to Solder Heat	JESD22- B106	Ta = 265°C, 10 sec Required for through hole devices only		0/90

Note: AEC-1pager is attached.

To view attachments:
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* ***PCN Customized Portal****.*

Current Part Number	New Part Number	Qualification Vehicle
NCV8415DTRKG	#NONE	NCV8401ADTRKG
NCV8413DTRKG	#NONE	NCV8401ADTRKG
NCV8411DTRKG	#NONE	NCV8401ADTRKG
NCV8408BDTRKG	#NONE	NCV8401ADTRKG
NCV8406BDTRKG	#NONE	NCV8406ADTRKG
NCV8405BDTRKG	#NONE	NCV8406ADTRKG
NCV8403BDTRKG	#NONE	NCV8401ADTRKG
NCV8401BDTRKG	#NONE	NCV8401ADTRKG