



## Initial Product/Process Change Notification

Document #: IPCN25232Z

Issue Date: 16 Feb 2023

|                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Title of Change:</b>                                                                                                                                                                                                                    | Transfer of ONC25 technology to onsemi Aizu, Japan from current site onsemi Gresham, United States and bonding wire material change for SC88A and TSOP5 packages assembled in onsemi, Seremban, Malaysia – NCV333A family.                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Proposed Changed Material First Ship Date:</b>                                                                                                                                                                                          | 01 Apr 2024 or earlier if approved by customer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Current Material Last Order Date:</b>                                                                                                                                                                                                   | N/A<br><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>                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Current Material Last Delivery Date:</b>                                                                                                                                                                                                | N/A<br><i>The Current Material Last Delivery Date may be subject to change based on build and depletion of the current (unchanged) material inventory</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Product Category:</b>                                                                                                                                                                                                                   | Active components – Integrated circuits                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Contact information:</b>                                                                                                                                                                                                                | Contact your local onsemi Sales Office or <a href="mailto:CheePan.Foo@onsemi.com">CheePan.Foo@onsemi.com</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>PCN Samples Contact:</b>                                                                                                                                                                                                                | Contact your local onsemi Sales Office to place sample order.<br>Sample requests are to be submitted no later than 45 days after publication of this change notification.<br>Samples delivery timing will be subject to request date, sample quantity and special customer packing/label requirements.                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Additional Reliability Data:</b>                                                                                                                                                                                                        | Contact your local onsemi Sales Office or <a href="mailto:Vladislav.Hrachovec@onsemi.com">Vladislav.Hrachovec@onsemi.com</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Type of Notification:</b>                                                                                                                                                                                                               | This is an Initial Product/Process Change Notification (IPCN) sent to customers. An IPCN is an advance notification about an upcoming change and contains general information regarding the change details and devices affected. It also contains the preliminary reliability qualification plan. The completed qualification and characterization data will be included in the Final Product/Process Change Notification (FPCN). This IPCN notification will be followed by a Final Product/Process Change Notification (FPCN) at least 6 months prior to implementation of the change. In case of questions, contact <a href="mailto:PCN.Support@onsemi.com">&lt;PCN.Support@onsemi.com&gt;</a> . |
| <b>Change Category</b>                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Category</b>                                                                                                                                                                                                                            | <b>Type of Change</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Process - Wafer Production                                                                                                                                                                                                                 | Move of all or part of wafer fab to a different location/site/subcontractor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Description and Purpose:</b>                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Transfer of ONC25 technology to onsemi Aizu, Japan from current site onsemi Gresham, United States.                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Tool sets are different but the exact same masking layers and steps are being used in the Aizu Fab.                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| This change is implemented to mitigate potential supply disruption; customers are encouraged to urgently review this change in order to minimize any potential impact to their supply chain.                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Additionally, the assembly of these packages will change bonding material from 0.8mil Au wire to 0.8mil Au flash, Pd coated Cu. All changes are detailed in the following change table and apply to both packages, unless otherwise noted. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| There will be no change to the orderable part number, and there will be no product marking change because of this notification. Fab source and BOM material information will be identified using the encoded traceability.                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

|                    | Before Change Description | After Change Description          |
|--------------------|---------------------------|-----------------------------------|
| Fab Site           | onsemi Gresham, OR, USA   | onsemi Aizu, Aizuwakamatsu, Japan |
| LeadFrame – TSOP5  | Ag Stripe                 | roughened ppf                     |
| Die Attach – TSOP5 | CRM1084P                  | Ablestick 8006NS                  |
| Bond Wire          | 0.8mil Au                 | 0.8mil AuFlash PCC                |

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

|                                                                                                     |                                                                                                                |
|-----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| <b>Reason / Motivation for Change:</b>                                                              | Source/Supply/Capacity Changes Process/Materials Change                                                        |
| <b>Anticipated impact on fit, form, function, reliability, product safety or manufacturability:</b> | The device will be qualified and validated based on the same Product Specification.<br>No anticipated impacts. |

**Sites Affected:**

| onsemi Sites              | External Foundry/Subcon Sites |
|---------------------------|-------------------------------|
| onsemi Aizu, Japan        | None                          |
| onsemi Seremban, Malaysia |                               |

|                                                  |                                                                           |
|--------------------------------------------------|---------------------------------------------------------------------------|
| <b>Marking of Parts/ Traceability of Change:</b> | The affected products will be identified with date code and custom source |
|--------------------------------------------------|---------------------------------------------------------------------------|

**Qualification Plan:**

**QV DEVICE NAME:** NCV333ASQ3T2G  
**RMS:** S89456  
**PACKAGE:** SC-88A-5

| Test                                               | Specification          | Condition                           | Interval |
|----------------------------------------------------|------------------------|-------------------------------------|----------|
| High Temperature Operating Life                    | JESD22-A108            | Ta=125°C, 100 % max rated Vcc       | 1008 hrs |
| Early Life Failure Rate                            | JESD22-A108            | Ta=125°C, 100 % max rated Vcc       | 48 hrs   |
| High Temperature Storage Life                      | JESD22-A103            | Ta= 150°C                           | 1008 hrs |
| Highly Accelerated Stress Test                     | J-STD-020, JESD22-A110 | 130°C/85%RH/18.8psig, biased        | 96 hrs   |
| Unbiased Highly Accelerated Stress Test            | J-STD-020, JESD22-A118 | 130°C/85%RH/18.8psig                | 96 hrs   |
| Temperature Cycling                                | J-STD-020, JESD22-A104 | -65°C to +150C                      | 1000 cyc |
| ESD-HBM                                            | JS-001-2017            | 2000V                               | -        |
| ESD-CDM                                            | JS-002-2018            | 1000V                               | -        |
| LU Class II                                        | JESD-78                | 100mA                               |          |
| Electrical Distribution / Thermal Characterization | onsemi DataSheet       | Test @ Cold & Room & Hot Cpk ≥ 1.67 | -        |

Estimated date for qualification completion: 30 June 2023

**Electrical Characteristics Summary:**

Electrical characteristics are not impacted.



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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 |
|---------------------|-----------------|-----------------------|
| NCV333ASN2T1G       | NA              | NCV333ASQ3T2G         |
| NCV333ASQ3T2G       | NA              | NCV333ASQ3T2G         |