



## Final Product/Process Change Notification

Document #:FPCN21292XO

Issue Date:20 Dec 2022

|                                                  |                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Title of Change:</b>                          | Qualification of VHVIC (Very High Voltage IC) Technology at onsemi Aizu, Japan                                                                                                                                                                                                                                                                                   |
| <b>Proposed First Ship date:</b>                 | 27 Mar 2023 or earlier if approved by customer                                                                                                                                                                                                                                                                                                                   |
| <b>Contact Information:</b>                      | Contact your local onsemi Sales Office or <a href="mailto:Scott.Brow@onsemi.com">Scott.Brow@onsemi.com</a>                                                                                                                                                                                                                                                       |
| <b>PCN Samples Contact:</b>                      | Contact your local onsemi Sales Office.<br>Sample requests are to be submitted no later than 30 days from the date of first notification, Initial PCN or Final PCN, for this change.<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:Tomas.Vajter@onsemi.com">Tomas.Vajter@onsemi.com</a>                                                                                                                                                                                                                                                   |
| <b>Type of Notification:</b>                     | This is a Final Product/Process Change Notification (FPCN) sent to customers. FPCNs are issued 90 days prior to implementation of the change.<br>onsemi will consider this change accepted, unless an inquiry is made in writing within 30 days of delivery of this notice. To do so, contact <a href="mailto:PCN.Support@onsemi.com">PCN.Support@onsemi.com</a> |
| <b>Marking of Parts/ Traceability of Change:</b> | Product that is produced out of Aizu, Japan can be identified on the label by referring to the "Diffused In" location. If produced in Aizu, Japan, it will show JP, if produced in Gresham, OR it will show US.                                                                                                                                                  |
| <b>Change Category:</b>                          | Wafer Fab Change                                                                                                                                                                                                                                                                                                                                                 |
| <b>Change Sub-Category(s):</b>                   | Manufacturing Site Addition                                                                                                                                                                                                                                                                                                                                      |

### Sites Affected:

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

### Description and Purpose:

onsemi would like to notify its customers of the qualification of our Very High Voltage IC (VHVIC) Technology at our onsemi Aizu, Japan FAB.

This qualification enables expanded capacity for this technology.

All products listed in this FPCN may be dual sourced from either the current onsemi wafer FAB in Gresham, OR US or onsemi Aizu, Japan.

This is the latest PCN associated with this change.

This technology was previously qualified into Aizu and has been running at this FAB for > 5 years for other products in this technology.

Reference FPCN21292X-FPCN21292XM for previous notifications on this equivalent change.

|     | Before Change Description | After Change Description |                     |
|-----|---------------------------|--------------------------|---------------------|
| FAB | onsemi Gresham, USA       | onsemi Aizu, Japan       | onsemi Gresham, USA |

There are no product material changes as a result of this change.

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



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### Reliability Data Summary:

QV DEVICE NAME: NCP1396ADR2G

RMS: P31418, O36903, O37701

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       | J-STD-020 JESD-A113 | MSL 1 @ 260°C                     |          | 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   |

QV DEVICE NAME: NCP1399AADR2G

RMS: P31421

PACKAGE: SOIC-16

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

QV DEVICE NAME: NCP1076P065G

RMS: P39367, O39368

PACKAGE: PDIP-8

| Test  | Specification | Condition                         | Interval | Results |
|-------|---------------|-----------------------------------|----------|---------|
| HTOL  | JESD22-A108   | Ta= 125°C, 600V                   | 1000 hrs | 0/240   |
| HTSL  | JESD22-A103   | Ta= 150°C                         | 1000 hrs | 0/240   |
| TC    | JESD22-A104   | Ta= -65°C to +150°C               | 500 cyc  | 0/240   |
| HAST  | JESD22-A110   | 130°C, 85% RH, 18.8psig, bias     | 96 hrs   | 0/240   |
| uHAST | JESD22-A118   | 130°C, 85% RH, 18.8psig, unbiased | 96 hrs   | 0/240   |

### 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**.

| Part Number  | Qualification Vehicle |
|--------------|-----------------------|
| NCP5304DR2G  | NCP1396ADR2G          |
| NCP5111DR2G  | NCP1396ADR2G          |
| NCP5109BDR2G | NCP1396ADR2G          |
| NCP5109ADR2G | NCP1396ADR2G          |
| NCP5106BDR2G | NCP1396ADR2G          |
| NCP5106ADR2G | NCP1396ADR2G          |



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|               |              |
|---------------|--------------|
| NCP1393BDR2G  | NCP1396ADR2G |
| NCP1392BDR2G  | NCP1396ADR2G |
| NCP1071STBT3G | NCP1076P065G |
| NCL30059BDR2G | NCP1396ADR2G |