



## Final Product/Process Change Notification

Document #:FPCN25344X

Issue Date:20 Nov 2023

|                                                  |                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Title of Change:</b>                          | Au to PCC wire conversion SOT23 package                                                                                                                                                                                                                                                                                                                          |
| <b>Proposed First Ship date:</b>                 | 22 Mar 2024 or earlier if approved by customer                                                                                                                                                                                                                                                                                                                   |
| <b>Contact Information:</b>                      | Contact your local onsemi Sales Office or <a href="mailto:Ernesto.Villamor@onsemi.com">Ernesto.Villamor@onsemi.com</a> or <a href="mailto:Joseph.Mendoza@onsemi.com">Joseph.Mendoza@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:Aileen.Allado@onsemi.com">Aileen.Allado@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> | Identification through date code cut off.                                                                                                                                                                                                                                                                                                                        |
| <b>Change Category:</b>                          | Assembly Change                                                                                                                                                                                                                                                                                                                                                  |
| <b>Change Sub-Category(s):</b>                   | Material Change                                                                                                                                                                                                                                                                                                                                                  |

|                          |                                      |
|--------------------------|--------------------------------------|
| <b>Sites Affected:</b>   |                                      |
| <b>onsemi Sites</b>      | <b>External Foundry/Subcon Sites</b> |
| onsemi Cebu, Philippines | None                                 |

### Description and Purpose:

This final notification is to inform customers of the change in bonding wire from Gold to Palladium Coated Copper (PCC) wire interconnect.

This change is to standardize the use of bonding wire across all packages.

|           | From            | To               |
|-----------|-----------------|------------------|
| Bond wire | 0.8 mil Au wire | 1.0 mil PCC wire |

The only material change is the bond wire.



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### Reliability Data Summary:

QV DEVICE NAME: **2N7002**

RMS: **F90395**

PACKAGE: **SOT23**

| 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                              |           | 0/924   |
| Intermittent Operating Life             | MIL-STD-750<br>(M1037)<br>AEC-Q101 | Ta=+25°C, delta Tj=100°C<br>On/off = 2 min | 15000 cyc | 0/231   |
| Temperature Cycling                     | JESD22-A104                        | Ta= -55°C to +150°C                        | 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   |
| Physical Dimensions                     | JESD22-B120                        |                                            |           |         |

### 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 |
|--------------|-----------------------|
| 2N7002       | 2N7002                |
| FDV301N      | 2N7002                |
| FDV304P      | 2N7002                |
| MMBF170      | 2N7002                |
| 9V49-NB9V004 | 2N7002                |
| FDV303N      | 2N7002                |
| NDS7002A     | 2N7002                |