



## Initial Product/Process Change Notification

Document #: IPCN24715X

Issue Date: 10 May 2022

|                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Title of Change:</b>                          | Replace Gold Wire with bare Copper Wire for MOSFET Products in onsemi Leshan, China                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Proposed First Ship date:</b>                 | 01 Dec 2022 or earlier if approved by customer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Contact Information:</b>                      | Contact your local onsemi Sales Office or <a href="mailto:York.Yu@onsemi.com">York.Yu@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>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 90 days prior to implementation of the change. In case of questions, contact < <a href="mailto:PCN.Support@onsemi.com">PCN.Support@onsemi.com</a> > |
| <b>Marking of Parts/ Traceability of Change:</b> | Traceability will be maintained by date code                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Change Category:</b>                          | Assembly Change                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Change Sub-Category(s):</b>                   | Material Change                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

### Sites Affected:

#### onsemi Sites

Leshan Phoenix Semiconductor, China

#### External Foundry/Subcon Sites

None

### Description and Purpose:

onsemi is notifying customers to replace 0.8mil or 1.0mil Gold wire with 0.8mil bare Copper Wire, for their SOT23 and SC88 package Mosfet Products assembled at Leshan site, China.

**Purpose for changing:** Today's market is driving for better electrical performance and higher thermal dissipation. Copper wire has higher thermal conductivity and lower resistivity which indicate better thermal dissipation.

|           | From                       | To                      |
|-----------|----------------------------|-------------------------|
| Bond Wire | 0.8mil or 1.0mil Gold wire | 0.8mil Bare copper wire |



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### Qualification Plan:

QV DEVICE NAME: FDG6306P & 2N7002DW & FDV305N & BSS123-G

RMS: 83418 & L83426 & L83376 & L83369

PACKAGE: SC88 & SOT23

| Test  | Specification                      | Condition                                  | Interval |
|-------|------------------------------------|--------------------------------------------|----------|
| HTRB  | JESD22-A108                        | Ta=150°C, 100% max rated V                 | 1008 hrs |
| HTGB  | JESD22-A108                        | Ta=150°C, 100% max rated Vgss              | 1008 hrs |
| HTSL  | JESD22-A103                        | Ta=150°C                                   | 1008 hrs |
| IOL   | MIL-STD-750<br>(M1037)<br>AEC-Q101 | Ta=+25°C, delta Tj=100°C<br>On/off = 2 min | 15K cyc  |
| TC    | JESD22-A104                        | Ta= -65°C to +150°C                        | 1000 cyc |
| HAST  | JESD22-A110                        | 130°C, 85% RH, 18.8psig, bias              | 96 hrs   |
| uHAST | JESD22-A118                        | 130°C, 85% RH, 18.8psig, unbiased          | 96 hrs   |
| PC    | J-STD-020, JESD-A113               | MSL 1 @ 260 °C                             | -        |
| RSH   | JESD22- B106                       | Ta = 265C, 10 sec                          | -        |
| SD    | JSTD002                            | Ta = 245C, 5 sec                           | -        |

Estimated date for qualification completion: 15 August 2022

### 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 |
|-------------|-----------------------|
| FDG6306P    | FDG6306P              |
| FDG6308P    | FDG6306P              |
| FDG6316P    | FDG6306P              |
| FDG6317NZ   | FDG6306P              |
| FDG6332C    | FDG6306P              |
| FDG6335N    | FDG6306P              |
| FDV305N     | FDV305N               |
| BSS123-G    | BSS123-G              |
| BSS138-G    | BSS123-G              |
| BSS84       | BSS123-G              |
| FDG6301N    | 2N7002DW              |
| FDG6303N    | 2N7002DW              |
| FDG6304P    | 2N7002DW              |
| FDG6321C    | 2N7002DW              |
| FDG6322C    | 2N7002DW              |



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|            |          |
|------------|----------|
| NDS0605    | BSS123-G |
| NDS0610-G  | BSS123-G |
| FDG1024NZ  | FDG6306P |
| FDG8842CZ  | 2N7002DW |
| FDG8850NZ  | 2N7002DW |
| 2N7002DW-G | 2N7002DW |
| 2N7002DW   | 2N7002DW |
| 2N7002-G   | BSS123-G |