



# Initial Product/Process Change Notification

Document #: IPCN24993X

Issue Date: 17 Oct 2022

|  |  |  |
|--|--|--|
| <b>Title of Change:</b>  | Qualification of Shantou Huashan (SHEDCL) China as dual source for TO247 FS Tech discrete IGBT   |  |
| <b>Proposed First Ship date:</b>   | 01 Jun 2023 or earlier if approved by customer   |  |
| <b>Contact Information:</b>  | Contact your local onsemi Sales Office or <a href="mailto:Charles.Jiang@onsemi.com">Charles.Jiang@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>   | The traceability of marking will be maintained by assembly plant code, lot code and date code  |  |
| <b>Change Category:</b>  | Test Change, Assembly Change   |  |
| <b>Change Sub-Category(s):</b>   | Material Change, Manufacturing Site Addition   |  |
| <b>Sites Affected:</b>   |  |  |
| <b>onsemi Sites</b>  | <b>External Foundry/Subcon Sites</b>   |  |
| None   | SHANTOU HUASHAN Electronic Devices Co., Ltd., China  |  |
| <b>Description and Purpose:</b>  |  |  |
| <p>This IPCN is to inform customers that onsemi plans to qualify Shantou Huashan (SHEDCL), China as an additional assembly and test site for selected TO247 Field Stop discrete IGBT products, other than onsemi Suzhou.</p> <p>The addition of Shantou Huashan (SHEDCL), China will enable a more competitive business supports to the affected customers.</p> <p>There are no changes in product electrical performances and specifications.</p> |  |  |
|  | <b>Before Change Description</b>   | <b>After Change Description</b>  |
| <b>Die Attach</b>  | PB92.5SN5AG2.5 (onsemi Suzhou)   | PB93.5SN5AG1.5 (Shantou Huashan (SHEDCL),China),<br>PB92.5SN5AG2.5 (onsemi Suzhou)                                       |
| <b>Assembly &amp; Final Test Sites</b>   | onsemi Suzhou (onsemi Suzhou)  | onsemi Suzhou (onsemi Suzhou),<br>Shantou Huashan (SHEDCL), China  |
| <b>Mold Compound</b>   | SU EME 6600CS/ SU EME G700HF/ KCC<br>KTMC-1050GFA (onsemi Suzhou)  | KTMC-1050GFA (Shantou Huashan (SHEDCL),<br>China),<br>SU EME 6600CS/ SU EME G700HF/ KCC KTMC-<br>1050GFA (onsemi Suzhou) |
| The traceability of marking will be maintained by assembly plant code, lot code and date code.   |  |  |



# Initial Product/Process Change Notification

Document #: IPCN24993X

Issue Date: 17 Oct 2022

## Qualification Plan:

**QV DEVICE NAME: FGH40T120SMD-SN00363**

**PACKAGE: TO-247**

| Test                | Specification                      | Condition                                  | Interval |
|---------------------|------------------------------------|--|----------|
| HTRB                | JESD22-A108                        | Ta=175°C, 100% max rated V                 | 1008 hrs |
| HTGB                | JESD22-A108                        | Ta=175°C, 100% max rated Vgss              | 1008 hrs |
| IOL                 | MIL-STD-750<br>(M1037)<br>AEC-Q101 | Ta=+25°C, delta Tj=100°C<br>On/off = 5 min | 6000 cyc |
| TC                  | JESD22-A104                        | Ta= -55°C to +150°C                        | 1000 cyc |
| HAST<br>or<br>H3TRB | JESD22-A110                        | Ta= 110°C, 85% RH, 18.8psig, bias 42V      | 264 hrs  |
|                     | JESD22 A101                        | Ta= 85°C, 85% RH, bias, 80% max V rating   | 1008 hrs |
| uHAST               | JESD22-A118                        | Ta= 110°C, 85% RH, 18.8psig, unbiased      | 264 hrs  |
| RSH                 | JESD22- B106                       | Ta = 265C, 10 sec                          |          |
| PD                  | JESD22-B100B                       | Case outline                               |          |

**QV DEVICE NAME: FGH30S130P**

**PACKAGE: TO-247**

| Test                | Specification                      | Condition                                  | Interval |
|---------------------|------------------------------------|--|----------|
| HTRB                | JESD22-A108                        | Ta=175°C, 100% max rated V                 | 1008 hrs |
| HTGB                | JESD22-A108                        | Ta=175°C, 100% max rated Vgss              | 1008 hrs |
| IOL                 | MIL-STD-750<br>(M1037)<br>AEC-Q101 | Ta=+25°C, delta Tj=100°C<br>On/off = 5 min | 6000 cyc |
| TC                  | JESD22-A104                        | Ta= -55°C to +150°C                        | 1000 cyc |
| HAST<br>or<br>H3TRB | JESD22-A110                        | Ta= 110°C, 85% RH, 18.8psig, bias 42V      | 264 hrs  |
|                     | JESD22 A101                        | Ta= 85°C, 85% RH, bias, 80% max V rating   | 1008 hrs |
| uHAST               | JESD22-A118                        | Ta= 110°C, 85% RH, 18.8psig, unbiased      | 264 hrs  |
| RSH                 | JESD22- B106                       | Ta = 265C, 10 sec                          |          |
| PD                  | JESD22-B100B                       | Case outline                               |          |

**QV DEVICE NAME: FGHL75T65MQDT**

**PACKAGE: TO-247**

| Test                | Specification                      | Condition                                  | Interval |
|---------------------|------------------------------------|--|----------|
| HTRB                | JESD22-A108                        | Ta=175°C, 100% max rated V                 | 1008 hrs |
| HTGB                | JESD22-A108                        | Ta=175°C, 100% max rated Vgss              | 1008 hrs |
| IOL                 | MIL-STD-750<br>(M1037)<br>AEC-Q101 | Ta=+25°C, delta Tj=100°C<br>On/off = 5 min | 6000 cyc |
| TC                  | JESD22-A104                        | Ta= -55°C to +150°C                        | 1000 cyc |
| HAST<br>or<br>H3TRB | JESD22-A110                        | Ta= 110°C, 85% RH, 18.8psig, bias 42V      | 264 hrs  |
|                     | JESD22 A101                        | Ta= 85°C, 85% RH, bias, 80% max V rating   | 1008 hrs |
| uHAST               | JESD22-A118                        | Ta= 110°C, 85% RH, 18.8psig, unbiased      | 264 hrs  |
| RSH                 | JESD22- B106                       | Ta = 265C, 10 sec                          |          |
| PD                  | JESD22-B100B                       | Case outline                               |          |

Estimated date for qualification completion: **30 January 2023**



# Initial Product/Process Change Notification

Document #: IPCN24993X

Issue Date: 17 Oct 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 |
|-------------------|-----------------------|
| FGH60N60SMD       | FGH40T120SMD-SN00363  |
| FGH60T65SHD-F155  | FGH40T120SMD-SN00363  |
| FGH60N60SFDTU     | FGH40T120SMD-SN00363  |
| FGH75T65SHDT-F155 | FGH40T120SMD-SN00363  |
| FGH75T65SHD-F155  | FGH40T120SMD-SN00363  |
| FGH75T65UPD       | FGH40T120SMD-SN00363  |
| FGH60N60UFDTU     | FGH40T120SMD-SN00363  |
| FGH75T65UPD-F155  | FGH40T120SMD-SN00363  |
| FGH40T65SHDF-F155 | FGH40T120SMD-SN00363  |
| FGH75T65SQD-F155  | FGHL75T65MQDT         |
| FGHL40T65LQDT     | FGHL75T65MQDT         |
| FGHL40T65MQD      | FGHL75T65MQDT         |
| FGHL40T65MQDT     | FGHL75T65MQDT         |
| FGHL50T65LQDT     | FGHL75T65MQDT         |
| FGHL50T65MQD      | FGHL75T65MQDT         |
| FGHL50T65MQDT     | FGHL75T65MQDT         |
| FGHL75T65LQDT     | FGHL75T65MQDT         |
| FGHL75T65MQD      | FGHL75T65MQDT         |
| FGHL75T65MQDT     | FGHL75T65MQDT         |
| FGH75T65SQDT-F155 | FGHL75T65MQDT         |
| FGH50T65SQD-F155  | FGHL75T65MQDT         |
| FGH30S130P        | FGH30S130P            |