



## Final Product/Process Change Notification

Document #:FPCN22966XJ

Issue Date:26 Jul 2021

| <b>Title of Change:</b>                                                          | Wafer Fab Capacity Expansion for FS3 Trench IGBT 12inch Technology at Global Foundries in New York, US and Gate driver IC 8inch Technology at Maine in South Portland US and FRD 8inch Technology at Roznov in Czech Republic.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                            |  |          |  |  |        |       |                  |                                                                 |                                                                                                                            |            |                                 |                                                                            |                                         |                                 |                                                                          |
|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|--|----------|--|--|--------|-------|------------------|-----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|------------|---------------------------------|----------------------------------------------------------------------------|-----------------------------------------|---------------------------------|--------------------------------------------------------------------------|
| <b>Proposed First Ship date:</b>                                                 | 30 Oct 2021 or earlier if approved by customer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                            |  |          |  |  |        |       |                  |                                                                 |                                                                                                                            |            |                                 |                                                                            |                                         |                                 |                                                                          |
| <b>Contact Information:</b>                                                      | Contact your local ON Semiconductor Sales Office or <a href="mailto:Sungdae.Shin@onsemi.com">Sungdae.Shin@onsemi.com</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                            |  |          |  |  |        |       |                  |                                                                 |                                                                                                                            |            |                                 |                                                                            |                                         |                                 |                                                                          |
| <b>PCN Samples Contact:</b>                                                      | Contact your local ON Semiconductor Sales Office or <a href="mailto:PCN.samples@onsemi.com">&lt;PCN.samples@onsemi.com&gt;</a> .<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 ON Semiconductor Sales Office or <a href="mailto:Jayoung.Hong@onsemi.com">Jayoung.Hong@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>ON Semiconductor 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>                                 | Material will be traceable with ONs lot trace code & tracking                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                            |  |          |  |  |        |       |                  |                                                                 |                                                                                                                            |            |                                 |                                                                            |                                         |                                 |                                                                          |
| <b>Change Category:</b>                                                          | Wafer Fab Change                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                            |  |          |  |  |        |       |                  |                                                                 |                                                                                                                            |            |                                 |                                                                            |                                         |                                 |                                                                          |
| <b>Change Sub-Category(s):</b>                                                   | Manufacturing Site Addition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                            |  |          |  |  |        |       |                  |                                                                 |                                                                                                                            |            |                                 |                                                                            |                                         |                                 |                                                                          |
| <b>Sites Affected:</b>                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                            |  |          |  |  |        |       |                  |                                                                 |                                                                                                                            |            |                                 |                                                                            |                                         |                                 |                                                                          |
| <b>ON Semiconductor Sites</b>                                                    | <b>External Foundry/Subcon Sites</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                            |  |          |  |  |        |       |                  |                                                                 |                                                                                                                            |            |                                 |                                                                            |                                         |                                 |                                                                          |
| ON Semiconductor Maine, United States                                            | Global Foundries East Fishkill, New York, United States                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                            |  |          |  |  |        |       |                  |                                                                 |                                                                                                                            |            |                                 |                                                                            |                                         |                                 |                                                                          |
| ON Semiconductor Roznov, Czech Republic                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                            |  |          |  |  |        |       |                  |                                                                 |                                                                                                                            |            |                                 |                                                                            |                                         |                                 |                                                                          |
| <b>Description and Purpose:</b>                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                            |  |          |  |  |        |       |                  |                                                                 |                                                                                                                            |            |                                 |                                                                            |                                         |                                 |                                                                          |
| Qualify 3 different FAB site with 3 different wafer technology as a below table; |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                            |  |          |  |  |        |       |                  |                                                                 |                                                                                                                            |            |                                 |                                                                            |                                         |                                 |                                                                          |
| The purpose of notification is increase wafer loading capacity.                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                            |  |          |  |  |        |       |                  |                                                                 |                                                                                                                            |            |                                 |                                                                            |                                         |                                 |                                                                          |
|                                                                                  | <table border="1"> <thead> <tr> <th></th> <th colspan="2">FAB Site</th> </tr> <tr> <th></th> <th>Before</th> <th>After</th> </tr> </thead> <tbody> <tr> <td><b>FS3 TIGBT</b></td> <td>ON semiconductor Aizu, Japan<br/>ON semiconductor Bucheon, Korea</td> <td>ON semiconductor Aizu, Japan<br/>ON semiconductor Bucheon, Korea<br/>Global Foundries East Fishkill, New York, United States</td> </tr> <tr> <td><b>FRD</b></td> <td>ON semiconductor Bucheon, Korea</td> <td>ON semiconductor Bucheon, Korea<br/>ON semiconductor Roznov, Czech Republic</td> </tr> <tr> <td><b>HDG4DA &amp; HDJ4 gate driver IC</b></td> <td>ON semiconductor Bucheon, Korea</td> <td>ON semiconductor Bucheon, Korea<br/>ON Semiconductor Maine, United States</td> </tr> </tbody> </table> |                                                                                                                            |  | FAB Site |  |  | Before | After | <b>FS3 TIGBT</b> | ON semiconductor Aizu, Japan<br>ON semiconductor Bucheon, Korea | ON semiconductor Aizu, Japan<br>ON semiconductor Bucheon, Korea<br>Global Foundries East Fishkill, New York, United States | <b>FRD</b> | ON semiconductor Bucheon, Korea | ON semiconductor Bucheon, Korea<br>ON semiconductor Roznov, Czech Republic | <b>HDG4DA &amp; HDJ4 gate driver IC</b> | ON semiconductor Bucheon, Korea | ON semiconductor Bucheon, Korea<br>ON Semiconductor Maine, United States |
|                                                                                  | FAB Site                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                            |  |          |  |  |        |       |                  |                                                                 |                                                                                                                            |            |                                 |                                                                            |                                         |                                 |                                                                          |
|                                                                                  | Before                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | After                                                                                                                      |  |          |  |  |        |       |                  |                                                                 |                                                                                                                            |            |                                 |                                                                            |                                         |                                 |                                                                          |
| <b>FS3 TIGBT</b>                                                                 | ON semiconductor Aizu, Japan<br>ON semiconductor Bucheon, Korea                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ON semiconductor Aizu, Japan<br>ON semiconductor Bucheon, Korea<br>Global Foundries East Fishkill, New York, United States |  |          |  |  |        |       |                  |                                                                 |                                                                                                                            |            |                                 |                                                                            |                                         |                                 |                                                                          |
| <b>FRD</b>                                                                       | ON semiconductor Bucheon, Korea                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ON semiconductor Bucheon, Korea<br>ON semiconductor Roznov, Czech Republic                                                 |  |          |  |  |        |       |                  |                                                                 |                                                                                                                            |            |                                 |                                                                            |                                         |                                 |                                                                          |
| <b>HDG4DA &amp; HDJ4 gate driver IC</b>                                          | ON semiconductor Bucheon, Korea                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ON semiconductor Bucheon, Korea<br>ON Semiconductor Maine, United States                                                   |  |          |  |  |        |       |                  |                                                                 |                                                                                                                            |            |                                 |                                                                            |                                         |                                 |                                                                          |
| There are no product material changes as a result of this change                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                            |  |          |  |  |        |       |                  |                                                                 |                                                                                                                            |            |                                 |                                                                            |                                         |                                 |                                                                          |
| There is no product marking change as a result of this change                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                            |  |          |  |  |        |       |                  |                                                                 |                                                                                                                            |            |                                 |                                                                            |                                         |                                 |                                                                          |



## Reliability Data Summary:

QV DEVICE NAME: FGH75T65SHD-F155, FGH60T65SHD-F155, FGY160T65SPD-F085

RMS: U78532, U78534, U78535, U78536, U76790, U74188, U74191, U72040

PACKAGE: TO247

| Test  | Specification | Condition                             | Interval | Results |
|-------|---------------|---------------------------------------|----------|---------|
| HTRB  | JESD22-A108   | Ta=175°C, 100 % max rated V           | 1008 hrs | 0/240   |
| HTGB  | JESD22-A108   | Ta=175°C, 100 % max Vge               | 1008 hrs | 0/240   |
| HTSL  | JESD22-A103   | Ta=175°C, No bias                     | 1008hrs  | 0/240   |
| TC    | JESD22-A104   | Ta= -55°C to + 150 °C                 | 1000 cyc | 0/240   |
| HAST  | JESD22-A110   | 130°C, 85% RH, 18.8psia, bias         | 96 hrs   | 0/240   |
| uHAST | JESD22-A118   | 130°C, 85% RH, 18.8psig, unbiased     | 96hrs    | 0/240   |
| IOL   | ML-STD-750    | Ta=25°C, delta Tj=100°C On/Off = 5min | 6000cyc  | 0/240   |

QV DEVICE NAME: FNB51560TD1, FNA41560T2, FNB80560T3

RMS: U74113, U74114, U74115,

PACKAGE: IPM55, IPM45H, IPM8

| Test | Specification | Condition                     | Interval | Results |
|------|---------------|-------------------------------|----------|---------|
| HTRB | JESD22-A108   | Ta=150°C, 80 % max rated V    | 1008 hrs | 0/39    |
| HTSL | JESD22-A103   | Ta=150°C, No bias             | 1008hrs  | 0/39    |
| TC   | JESD22-A104   | Ta= -55°C to + 150 °C         | 1000 cyc | 0/69    |
| HAST | JESD22-A110   | 130°C, 85% RH, 18.8psia, bias | 96 hrs   | 0/45    |

QV DEVICE NAME: FAN73912MX

RMS O57762

PACKAGE SOICW16

| Test  | Specification       | Condition                         | Interval | Results |
|-------|---------------------|-----------------------------------|----------|---------|
| HTOL  | JESD22-A108         | Ta=125°C, 100 % max rated Vcc     | 1008 hrs | 0/240   |
| HTSL  | JESD22-A103         | Ta= 150°C                         | 2016 hrs | 0/240   |
| TC    | JESD22-A104         | Ta= -65°C to +150°C               | 1000 cyc | 0/240   |
| HAST  | JESD22-A110         | 130°C, 85% RH, 18.8psig, bias     | 192 hrs  | 0/240   |
| uHAST | JESD22-A118         | 130°C, 85% RH, 18.8psig, unbiased | 96 hrs   | 0/240   |
| PC    | J-STD-020 JESD-A113 | MSL 3 @ 260 °C                    |          |         |

QV DEVICE NAME: FSBB10CH120D

RMS K57911

PACKAGE SPM3

| Test | Specification | Condition              | Interval | Results |
|------|---------------|------------------------|----------|---------|
| HTSL | JESD22-A103   | Ta= 150°C              | 2016 hrs | 0/36    |
| TC   | JESD22-A104   | Ta= -40°C to +125°C    | 1000 cyc | 0/66    |
| THU  | JESD22-A101   | 85°C, 85% RH, unbiased | 1008 hrs | 0/36    |



QV DEVICE NAME: FFA60UA60DN

RRF: 68327, 68386

PACKAGE: TO3P

| Test  | Specification                   | Condition                              | Interval  | Result |
|-------|---------------------------------|----------------------------------------|-----------|--------|
| HTRB  | JESD22-A108                     | Tj = 175°C , 80% max rated V           | 1008 hrs  | 0/77   |
| HAST  | JESD22-A110                     | 130°C, 85%RH, 18.8 psig, bias          | 96hrs     | 0/77   |
| UHAST | JESD22-A118                     | 130°C, 85%RH, 18.8 psig, unbiased      | 96hrs     | 0/77   |
| TC    | JESD22-A104                     | Ta = -55°C to +150°C                   | 1000 cyc  | 0/77   |
| HTSL  | JESD22-A103                     | Ta = 175°C                             | 1008 Hrs  | 0/77   |
| IOL   | MIL STD750 (M 1037)<br>AEC Q101 | Ta=+25°C, delta Tj=100°C,on/off =2 min | 15000 cyc | 0/77   |
| RSH   | JESD22- B106                    | Ta=265°C, 10 sec                       |           | 0/30   |

QV DEVICE NAME: FFH30S60STU

RRF: 68326, 68387

PACKAGE: TO247

| Test  | Specification                   | Condition                              | Interval | Result |
|-------|---------------------------------|----------------------------------------|----------|--------|
| HTRB  | JESD22-A108                     | Tj = 175°C , 80% max rated V           | 1008 hrs | 0/77   |
| HAST  | JESD22-A110                     | 130°C, 85%RH, 18.8 psig, bias          | 96hrs    | 0/77   |
| UHAST | JESD22-A118                     | 130°C, 85%RH, 18.8 psig, unbiased      | 96hrs    | 0/77   |
| TC    | JESD22-A104                     | Ta = -55°C to +150°C                   | 1000 cyc | 0/77   |
| HTSL  | JESD22-A103                     | Ta = 175°C                             | 1008 Hrs | 0/77   |
| IOL   | MIL STD750 (M 1037)<br>AEC Q101 | Ta=+25°C, delta Tj=100°C,on/off =5 min | 6000 cyc | 0/77   |
| RSH   | JESD22- B106                    | Ta=265°C, 10 sec                       |          | 0/30   |

QV DEVICE NAME: FNA41560T2

RRF: 68330, 68385

PACKAGE: SPM45

| Test  | Specification | Condition                         | Interval | Result |
|-------|---------------|-----------------------------------|----------|--------|
| UHAST | JESD22-A118   | 130°C, 85%RH, 18.8 psig, unbiased | 96hrs    | 0/36   |
| TC    | JESD22-A104   | Ta = -40°C to +125°C              | 200 cyc  | 0/36   |
| HTSL  | JESD22-A103   | Ta = 150°C                        | 1008 Hrs | 0/36   |
| H3TRB | JESD22-A101   | 85°C, 85%RH, 18.8 psig, bias      | 1008 Hrs | 0/36   |

**Electrical Characteristics Summary:**

Electrical characteristics are not impacted.



## Final Product/Process Change Notification

Document #:FPCN22966XJ

Issue Date:26 Jul 2021

**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                                                             |
|-------------|-----------------------------------------------------------------------------------|
| FNB33060T   | FGY160T65SPD-F085, FNA41560T2, FAN73912MX, FSBB10CH120D, FFA60UA60DN, FFH30S60STU |
| FNB33060T6S | FGY160T65SPD-F085, FNA41560T2, FAN73912MX, FSBB10CH120D, FFA60UA60DN, FFH30S60STU |
| FNB34060T   | FGY160T65SPD-F085, FNA41560T2, FAN73912MX, FSBB10CH120D, FFA60UA60DN, FFH30S60STU |
| FNB35060T   | FGY160T65SPD-F085, FNA41560T2, FAN73912MX, FSBB10CH120D, FFA60UA60DN, FFH30S60STU |

Japanese translation of the notification starts here.  
通知の日本語訳はここから始まります。

**Note:** *The Japanese version is for reference only. In case of any differences between the English and Japanese version, the English version shall control.*

注：日本語版は参照用です。英語版と日本語版の違いがある場合は、英語版が優先されます。



## 最終製品 / プロセス変更通知

文書番号# : FPCN22966XJ

発行日: 26 Jul 2021

|                                           |                                                                                                                                                                                                                         |                                                                                                                            |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| 変更件名:                                     | ニューヨーク州 (米国) のグローバルファウンドリーズの FS3 トレンチ IGBT 12 インチ技術、メイン州サウス・ポートランド (米国) のゲートドライバ IC 8 インチ技術、ロジノフ (チェコ共和国) の FRD 8 インチ技術のウエハ製造能力の拡大。                                                                                     |                                                                                                                            |
| 初回出荷予定日:                                  | 2021 年 10 月 30 日またはお客様からの承認が得られた場合はそれ以前。                                                                                                                                                                                |                                                                                                                            |
| 連絡先情報:                                    | 現地のオン・セミコンダクター営業所ま <a href="mailto:Sungdae.Shin@onsemi.com">Sungdae.Shin@onsemi.com</a> にお問い合わせください。                                                                                                                    |                                                                                                                            |
| サンプル:                                     | 現地のオン・セミコンダクター営業所また <a href="mailto:PCN.samples@onsemi.com">PCN.samples@onsemi.com</a> にお問い合わせください。<br>サンプルは、この変更の初回 PCN または最終 PCN の最初の通知の日付から 30 日以内に要求してください。<br>サンプル納入時は、依頼日、数量、特別梱包材/ラベル条件によって異なります。                |                                                                                                                            |
| 追加の信頼性データ:                                | お客さまの地域のオン・セミコンダクター営業所ま <a href="mailto:Jayoung.Hong@onsemi.com">Jayoung.Hong@onsemi.com</a> にお問い合わせください。                                                                                                               |                                                                                                                            |
| 通知種別:                                     | これは、お客様宛の最終製品 / プロセス変更通知 (FPCN) です。FPCN は、変更実施の 90 日前に発行されます。<br>オン・セミコンダクターは、この通知の送付から 30 日以内に書面による問い合わせがない限り、この変更が承諾されたものとみなします。お問い合わせは <a href="mailto:PCN.Support@onsemi.com">PCN.Support@onsemi.com</a> 宛てにお願いします。 |                                                                                                                            |
| 部品のマーキング/変更のトレーサビリティ:                     | 材料はオン・セミコンダクターのロットトレースコードおよびトラッキングによって追跡可能です。                                                                                                                                                                           |                                                                                                                            |
| 変更カテゴリ: ウエハファブの変更                         |                                                                                                                                                                                                                         |                                                                                                                            |
| 変更サブカテゴリ: 製造拠点の追加                         |                                                                                                                                                                                                                         |                                                                                                                            |
| 影響を受ける拠点:                                 |                                                                                                                                                                                                                         |                                                                                                                            |
| オン・セミコンダクター拠点:                            | 外部製造工場 / 下請業者拠点:                                                                                                                                                                                                        |                                                                                                                            |
| ON Semiconductor Maine, United States     | Global Foundries East Fishkill, New York, United States                                                                                                                                                                 |                                                                                                                            |
| ON Semiconductor Roznov, Czech Republic   |                                                                                                                                                                                                                         |                                                                                                                            |
| 説明および目的:                                  |                                                                                                                                                                                                                         |                                                                                                                            |
| 下表のように、3 つの異なるウエハ技術を持つ 3 つの異なる製造拠点を認定します。 |                                                                                                                                                                                                                         |                                                                                                                            |
| 今回の通知の目的は、ウエハ生産能力を高めることです。                |                                                                                                                                                                                                                         |                                                                                                                            |
|                                           | FAB サイト                                                                                                                                                                                                                 |                                                                                                                            |
|                                           | 前                                                                                                                                                                                                                       | 後                                                                                                                          |
| FS3 TIGBT                                 | ON semiconductor Aizu, Japan<br>ON semiconductor Bucheon, Korea                                                                                                                                                         | ON semiconductor Aizu, Japan<br>ON semiconductor Bucheon, Korea<br>Global Foundries East Fishkill, New York, United States |
| FRD                                       | ON semiconductor Bucheon, Korea                                                                                                                                                                                         | ON semiconductor Bucheon, Korea<br>ON semiconductor Roznov, Czech Republic                                                 |
| HGD4DA & HDJ4 gate driver IC              | ON semiconductor Bucheon, Korea                                                                                                                                                                                         | ON semiconductor Bucheon, Korea<br>ON Semiconductor Maine, United States                                                   |
| この変更による製品の材質の変更はありません                     |                                                                                                                                                                                                                         |                                                                                                                            |
| この変更による製品マーキングの変更はありません                   |                                                                                                                                                                                                                         |                                                                                                                            |



## 信頼性データの要約:

デバイス名: FGH75T65SHD-F155, FGH60T65SHD-F155, FGY160T65SPD-F085RMS : U78532, U78534, U78535, U78536, U76790, U74188, U74191, U72040パッケージ: TQ247

| テスト   | 仕様          | 条件                                    | 間隔              | 結果            |
|-------|-------------|---------------------------------------|-----------------|---------------|
| HTRB  | JESD22-A108 | Ta=175°C, <u>100</u> % max rated V    | <u>1008</u> hrs | 0/ <u>240</u> |
| HTGB  | JESD22-A108 | Ta=175°C, <u>100</u> % max Vge        | <u>1008</u> hrs | 0/ <u>240</u> |
| HTSL  | JESD22-A103 | Ta=175°C, No bias                     | <u>1008hrs</u>  | 0/240         |
| TC    | JESD22-A104 | Ta= -55°C to + <u>150</u> °C          | <u>1000</u> cyc | 0/ <u>240</u> |
| HAST  | JESD22-A110 | 130°C, 85% RH, 18.8psia, bias         | <u>96</u> hrs   | 0/ <u>240</u> |
| uHAST | JESD22-A118 | 130°C, 85% RH, 18.8psig, unbiased     | <u>96hrs</u>    | 0/ <u>240</u> |
| IOL   | ML-STD-750  | Ta=25°C, delta Tj=100°C On/Off = 5min | <u>6000cyc</u>  | 0/240         |

デバイス名: FNB51560TD1, FNA41560T2, FNB80560T3RMS : U74113, U74114, U74115パッケージ: IPM55, IPM45H, IPM8

| テスト  | 仕様          | 条件                                | 間隔              | 結果           |
|------|-------------|-----------------------------------|-----------------|--------------|
| HTRB | JESD22-A108 | Ta=150°C, <u>80</u> % max rated V | <u>1008</u> hrs | 0/ <u>39</u> |
| HTSL | JESD22-A103 | Ta=150°C, No bias                 | <u>1008hrs</u>  | 0/39         |
| TC   | JESD22-A104 | Ta= -55°C to + <u>150</u> °C      | <u>1000</u> cyc | 0/ <u>69</u> |
| HAST | JESD22-A110 | 130°C, 85% RH, 18.8psia, bias     | <u>96</u> hrs   | 0/ <u>45</u> |

デバイス名: FAN73912MXRMS : O57762パッケージ: SOICW16

| テスト   | 仕様                  | 条件                                | 間隔       | 結果    |
|-------|---------------------|-----------------------------------|----------|-------|
| HTOL  | JESD22-A108         | Ta=125°C, 100 % max rated Vcc     | 1008 hrs | 0/240 |
| HTSL  | JESD22-A103         | Ta= 150°C                         | 2016 hrs | 0/240 |
| TC    | JESD22-A104         | Ta= -65°C to +150°C               | 1000 cyc | 0/240 |
| HAST  | JESD22-A110         | 130°C, 85% RH, 18.8psig, bias     | 192 hrs  | 0/240 |
| uHAST | JESD22-A118         | 130°C, 85% RH, 18.8psig, unbiased | 96 hrs   | 0/240 |
| PC    | J-STD-020 JESD-A113 | MSL 3 @ 260 °C                    |          |       |

デバイス名: FSBB10CH120DRMS : K57911パッケージ: SPM3

| テスト  | 仕様          | 条件                     | 間隔       | 結果   |
|------|-------------|------------------------|----------|------|
| HTSL | JESD22-A103 | Ta= 150°C              | 2016 hrs | 0/36 |
| TC   | JESD22-A104 | Ta= -40°C to +125°C    | 1000 cyc | 0/66 |
| THU  | JESD22-A101 | 85°C, 85% RH, unbiased | 1008 hrs | 0/36 |



デバイス名 : FFA60UA60DN

RMS : 68327, 68386

パッケージ : TO3P

| テスト  | 仕様                              | 条件                                     | 間隔        | 結果   |
|------|---------------------------------|----------------------------------------|-----------|------|
| HTRB | JESD22-A108                     | Tj = 175°C , 80% max rated V           | 1008 hrs  | 0/77 |
| HAST | JESD22-A110                     | 130°C, 85%RH, 18.8 psig, bias          | 96hrs     | 0/77 |
| UHA  | JESD22-A118                     | 130°C, 85%RH, 18.8 psig, unbiased      | 96hrs     | 0/77 |
| TC   | JESD22-A104                     | Ta = -55°C to +150°C                   | 1000 cyc  | 0/77 |
| HTSL | JESD22-A103                     | Ta = 175°C                             | 1008 Hrs  | 0/77 |
| IOL  | MIL STD750 (M 1037)<br>AEC Q101 | Ta=+25°C, delta Tj=100°C,on/off =2 min | 15000 cyc | 0/77 |
| RSH  | JESD22- B106                    | Ta=265°C, 10 sec                       |           | 0/30 |

デバイス名 : FFH30S60STU

RMS : 68326, 68387

パッケージ : TO247

| テスト  | 仕様                              | 条件                                     | 間隔       | 結果   |
|------|---------------------------------|----------------------------------------|----------|------|
| HTRB | JESD22-A108                     | Tj = 175°C , 80% max rated V           | 1008 hrs | 0/77 |
| HAST | JESD22-A110                     | 130°C, 85%RH, 18.8 psig, bias          | 96hrs    | 0/77 |
| UHA  | JESD22-A118                     | 130°C, 85%RH, 18.8 psig, unbiased      | 96hrs    | 0/77 |
| TC   | JESD22-A104                     | Ta = -55°C to +150°C                   | 1000 cyc | 0/77 |
| HTSL | JESD22-A103                     | Ta = 175°C                             | 1008 Hrs | 0/77 |
| IOL  | MIL STD750 (M 1037)<br>AEC Q101 | Ta=+25°C, delta Tj=100°C,on/off =5 min | 6000 cyc | 0/77 |
| RSH  | JESD22- B106                    | Ta=265°C, 10 sec                       |          | 0/30 |

デバイス名 : FNA41560T2

RMS : 68330, 68385

パッケージ : SPM45

| テスト   | 仕様          | 条件                                | 間隔       | 結果   |
|-------|-------------|-----------------------------------|----------|------|
| UHA   | JESD22-A118 | 130°C, 85%RH, 18.8 psig, unbiased | 96hrs    | 0/36 |
| TC    | JESD22-A104 | Ta = -40°C to +125°C              | 200 cyc  | 0/36 |
| HTSL  | JESD22-A103 | Ta = 150°C                        | 1008 Hrs | 0/36 |
| H3TRB | JESD22-A101 | 85°C, 85%RH, 18.8 psig, bias      | 1008 Hrs | 0/36 |

## 電氣的特性の要約:

電氣的特性に影響はありません。



## 最終製品 / プロセス変更通知

文書番号# : FPCN22966XJ

発行日: 26 Jul 2021

## 影響を受ける部品の一覧:

注: 部品一覧には標準部品番号 (既製品) のみが記載されています。本 PCN の影響を受けるカスタム部品番号は、PCN メールで提供される顧客個別の付録、または PCN カスタマイズポータルに記載されています。

| 部品番号        | 認定試験用ピークル                                                                         |
|-------------|-----------------------------------------------------------------------------------|
| FNB33060T   | FGY160T65SPD-F085, FNA41560T2, FAN73912MX, FSBB10CH120D, FFA60UA60DN, FFH30S60STU |
| FNB33060T6S | FGY160T65SPD-F085, FNA41560T2, FAN73912MX, FSBB10CH120D, FFA60UA60DN, FFH30S60STU |
| FNB34060T   | FGY160T65SPD-F085, FNA41560T2, FAN73912MX, FSBB10CH120D, FFA60UA60DN, FFH30S60STU |
| FNB35060T   | FGY160T65SPD-F085, FNA41560T2, FAN73912MX, FSBB10CH120D, FFA60UA60DN, FFH30S60STU |

**Appendix A: Changed Products****PCN#: FPCN22966XJ**  
**Issue Date: Jul 26, 2021**

| Product   | Customer Part Number | Qualification Vehicle                                                                            | New Part Number | Replacement Supplier |
|-----------|----------------------|--------------------------------------------------------------------------------------------------|-----------------|----------------------|
| FNB33060T |                      | FGY160T65SPD-F085,<br>FNA41560T2,<br>FAN73912MX,<br>FSBB10CH120D,<br>FFA60UA60DN,<br>FFH30S60STU |                 |                      |
| FNB35060T |                      | FGY160T65SPD-F085,<br>FNA41560T2,<br>FAN73912MX,<br>FSBB10CH120D,<br>FFA60UA60DN,<br>FFH30S60STU |                 |                      |
| FNB34060T |                      | FGY160T65SPD-F085,<br>FNA41560T2,<br>FAN73912MX,<br>FSBB10CH120D,<br>FFA60UA60DN,<br>FFH30S60STU |                 |                      |