



# Final Product/Process Change Notification

Document #:FPCN22647XBC

Issue Date:11 May 2021

|  |   |
|--|---|
| <b>Title of Change:</b>                          | Mold compound change due to End of Life of Samsung SDI molding compound in Huashan TO247 package  |
| <b>Proposed First Ship date:</b>                 | 18 Aug 2021 or earlier if approved by customer  |
| <b>Contact Information:</b>                      | Contact your local ON Semiconductor Sales Office or <a href="mailto:Lisa.Wang@onsemi.com">Lisa.Wang@onsemi.com</a> / <a href="mailto:norsahida.sahman@onsemi.com">norsahida.sahman@onsemi.com</a>   |
| <b>PCN Samples Contact:</b>                      | Contact your local ON Semiconductor Sales Office or < <a href="mailto:PCN.samples@onsemi.com">PCN.samples@onsemi.com</a> >. 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. 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:Lalan.Ortega@onsemi.com">Lalan.Ortega@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. 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> | Date Code   |
| <b>Change Category:</b>                          | Assembly Change   |
| <b>Change Sub-Category(s):</b>                   | Material Change   |

**Sites Affected:**

**ON Semiconductor Sites**

None

**External Foundry/Subcon Sites**

SHANTOU HUASHAN Electronic Devices Co., Ltd., China

**Description and Purpose:**

ON Semiconductor wishes to inform our customers of a change in mold compounds used for the devices listed in this PCN. This is the final Product change notification (FPCN) of IPCN22647.

This change is a result of an End of Life notification received from Samsung for several of their SDI Mold Compounds. Due to the discontinuance of the SDI mold compounds, ON Semiconductor will only have limited supplies of the existing material and in some cases this may not allow for the normal change notification period.

All other aspects of the impacted products (form, fit, function) will remain unchanged.

|               | Before Change Description | After Change Description |
|---------------|---------------------------|--------------------------|
| Mold Compound | Samsung SG8200DL          | KCC KTMC1050GFA          |

**Reliability Data Summary:****QV DEVICE NAME: FDH50N50-F133****RMS: U60276, O62585****PACKAGE: TO247 3L AL SNGL PBF DS**

| Test      | Specification                                 | Condition   | Interval | Results |
|-----------|---|---|----------|---------|
| EV        | JEDS22 B101                                   | External Visual, Device construction, marking, and workmanship          |          | 0/77    |
| HTRB      | JESD22-A108                                   | Ta = 150°C, 100% rated V  | 1008 hrs | 0/77    |
| HTGB      | JESD22-A108                                   | Ta = 150°C, 100% max rated V  | 1008 hrs | 0/77    |
| HTSL      | JESD22-A103                                   | Ta = 150°C  | 1008 hrs | 0/77    |
| IOL       | MIL-STD-750 (M1037)<br>AEC-Q101               | Ta = +25°C, delta Tj=100°C<br>On/off = 5.0 min                          | 6000 cyc | 0/77    |
| TC        | JESD22-A104                                   | Ta = -55°C to +150°C  | 1000 cyc | 0/77    |
| uHAST     | JESD22-A118                                   | Ta = 130°C, 85% RH, 18.8psig, unbiased                                  | 96 hrs   | 0/77    |
| H3TR<br>B | JEDS22 A101                                   | Ta = 85°C, 85% RH, V=80% rated V  | 1008 hrs | 0/77    |
| RSH       | JESD22- B106                                  | Ta = 265°C, 10 sec  |          | 0/30    |
| SD        | JSTD002                                       | Ta = 245°C, 10 sec  |          | 0/15    |
| PD        | JESD22 B100                                   | Per POD / Case Outline,<br>Verify physical dimensions to specifications | 0 hr     | 0/30    |
| SAT       | JESD22-A104, Appendix 6<br>J-STD-035          | Check delamination  | 0 hr     | 0/25    |
| DPA       | AEC Q101-004 Section 4                        | Following TC  | 1008 hrs | 0/2     |
| DPA       | AEC Q101-004 Section 4                        | Following HTRB  | 1008 hrs | 0/2     |
| DPA       | AEC Q101-004 Section 4                        | Following HTGB  | 1008 hrs | 0/2     |
| DPA       | AEC Q101-004 Section 4                        | Following HAST  | 1008 hrs | 0/2     |
| ED        | Electrical Distribution /<br>Characterization | Tri Temperature, Per 48A  | 0 hr     | 0 / 90  |
| TR        | Thermal Resistance Comparison                 | per device specification, pre & post process change                     | 0 hr     | 0 / 30  |

**QV DEVICE NAME: RURG80100****RMS: J60342, U62626, O62627****PACKAGE: TO-247 2 AL SNGL PBF DS**

| Test | Specification                        | Condition   | Interval | Results |
|------|--------------------------------------|---|----------|---------|
| EV   | JEDS22 B101                          | External Visual, Device construction, marking, and workmanship          |          | 0/231   |
| HTRB | JESD22-A108                          | Ta = 175°C, 100% rated V  | 1008 hrs | 0/231   |
| HTSL | JESD22-A103                          | Ta = 175°C  | 1008 hrs | 0/231   |
| IOL  | MIL-STD-750 (M1037)<br>AEC-Q101      | Ta = +25°C, delta Tj=100°C<br>On/off = 5.0 min                          | 6000cyc  | 0/231   |
| TC   | JESD22-A104                          | Ta = -55°C to +150°C  | 1000 cyc | 0/231   |
| AC   | JESD22-A102                          | 121°C, 100% RH, 15.5psig, unbiased                                      | 96 hrs   | 0/231   |
| HAST | JESD22-A110                          | 130°C, 85% RH, 18.8psig, bias   | 96 hrs   | 0/231   |
| RSH  | JESD22- B106                         | Ta = 265°C, 10 sec  |          | 0/90    |
| SD   | JSTD002                              | Ta = 245°C, 10 sec  |          | 0/45    |
| PD   | JESD22 B100                          | Per POD / Case Outline,<br>Verify physical dimensions to specifications | 0 hr     | 0/30    |
| SAT  | JESD22-A104, Appendix 6<br>J-STD-035 | Check Delamination  | 0 hr     | 0/22    |



|     |  |   |          |        |
|-----|--|---|----------|--------|
| DPA | AEC Q101-004 Section 4                     | Following TC  | 1008 hrs | 0/6    |
| DPA | AEC Q101-004 Section 4                     | Following HAST                                      | 1008 hrs | 0/6    |
| ED  | Electrical Distribution / Characterization | Tri Temperature, Per 48A                            | 0 hr     | 0 / 90 |
| TR  | Thermal Resistance Comparison              | per device specification, pre & post process change | 0 hr     | 0 / 30 |

**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 |
|----------------|-----------------------|
| FDH047AN08A0   | FDH50N50-F133         |
| FDH3632        | FDH50N50-F133         |
| FDH45N50F-F133 | FDH50N50-F133         |
| FDH50N50-F133  | FDH50N50-F133         |
| HUF75344G3     | FDH50N50-F133         |
| HUF75345G3     | FDH50N50-F133         |
| HUF75639G3     | FDH50N50-F133         |
| HUF75852G3     | FDH50N50-F133         |
| FDH44N50       | FDH50N50-F133         |
| FQH44N10-F133  | FDH50N50-F133         |
| FFH30US30DN    | RURG80100             |
| FFH50US60S     | RURG80100             |
| FFH60UP40S     | RURG80100             |
| FFH75H60S      | RURG80100             |
| ISL9K1560G3    | RURG80100             |
| ISL9R18120G2   | RURG80100             |
| ISL9R30120G2   | RURG80100             |
| RHRG1560CC     | RURG80100             |
| RHRG3060       | RURG80100             |
| RURG1520CC     | RURG80100             |
| RURG3020CC     | RURG80100             |
| RURG3060CC     | RURG80100             |
| RURG80100      | RURG80100             |

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# : FPCN22647XBC

発行日: 11 May 2021

|                |   |                  |                 |
|----------------|---|------------------|-----------------|
| 変更件名:          | Huashan (華山) TO247 パッケージにおける Samsung SDI 製モールドコンパウンドの生産終了に伴うモールドコンパウンドの変更   |                  |                 |
| 初回出荷予定日:       | 18 Aug 2021 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たは < <a href="mailto:Lisa.Wang@onsemi.com">Lisa.Wang@onsemi.com</a> / <a href="mailto:norsahida.sahman@onsemi.com">norsahida.sahman@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は < <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、この変更の初回通知、初回 PCN 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たは < <a href="mailto:Lalan.Ortega@onsemi.com">Lalan.Ortega@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。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。   |                  |                 |
| 変更部品の識別:       | 日付コード   |                  |                 |
| 変更カテゴリ:        | アセンブリの変更  |                  |                 |
| 変更サブカテゴリ:      | 材料の変更   |                  |                 |
| 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:  |                  |                 |
| 無し             | SHANTOU HUASHAN Electronic Devices Co., Ltd., China   |                  |                 |
| 説明および目的:       | <p>オン・セミコンダクターは、本 FPCN に列記されたデバイスに対して使用されるモールドコンパウンドの変更をお客様にお知らせいたします。これは IPCN22647 の最終製品変更通知 (FPCN) です。</p> <p>この変更は、Samsung 製 SDI モールドコンパウンドの一部について同社から受けた生産終了通知による影響です。SDI モールドコンパウンドの廃止によって、オン・セミコンダクターでは既存の材料の供給が限定されるようになるため、場合によっては、このことによって通常の変更通知期間が不可能になる場合があります。</p> <p>対象製品のその他の特性 (形状、適合性、機能) については変更はありません。</p> |                  |                 |
|                | プロセス  | 変更前の表記           | 変更後の表記          |
|                | Mold Compound   | Samsung SG8200DL | KCC KTMC1050GFA |



## 信頼性データの要約:

デバイス名: **FDH50N50-F133**RMS: **U60276, O62585**パッケージ: **TO247 3L AL SNGL PBF DS**

| テスト   | 仕様   | 条件  | 間隔       | 結果     |
|-------|--|---|----------|--------|
| EV    | JEDS22 B101                                | External Visual, Device construction, marking, and workmanship          |          | 0/77   |
| HTRB  | JESD22-A108                                | Ta = 150°C, 100% rated V  | 1008 hrs | 0/77   |
| HTGB  | JESD22-A108                                | Ta = 150°C, 100% max rated V  | 1008 hrs | 0/77   |
| HTSL  | JESD22-A103                                | Ta = 150°C  | 1008 hrs | 0/77   |
| IOL   | MIL-STD-750 (M1037)<br>AEC-Q101            | Ta = +25°C, delta Tj=100°C<br>On/off = 5.0 min                          | 6000 cyc | 0/77   |
| TC    | JESD22-A104                                | Ta = -55°C to +150°C  | 1000 cyc | 0/77   |
| uHAST | JESD22-A118                                | Ta = 130°C, 85% RH, 18.8psig, unbiased                                  | 96 hrs   | 0/77   |
| H3TRB | JEDS22 A101                                | Ta = 85°C, 85% RH, V=80% rated V  | 1008 hrs | 0/77   |
| RSH   | JESD22- B106                               | Ta = 265°C, 10 sec  |          | 0/30   |
| SD    | JSTD002                                    | Ta = 245°C, 10 sec  |          | 0/15   |
| PD    | JESD22 B100                                | Per POD / Case Outline,<br>Verify physical dimensions to specifications | 0 hr     | 0/30   |
| SAT   | JESD22-A104, Appendix 6<br>J-STD-035       | Check delamination  | 0 hr     | 0/25   |
| DPA   | AEC Q101-004 Section 4                     | Following TC  | 1008 hrs | 0/2    |
| DPA   | AEC Q101-004 Section 4                     | Following HTRB  | 1008 hrs | 0/2    |
| DPA   | AEC Q101-004 Section 4                     | Following HTGB  | 1008 hrs | 0/2    |
| DPA   | AEC Q101-004 Section 4                     | Following HAST  | 1008 hrs | 0/2    |
| ED    | Electrical Distribution / Characterization | Tri Temperature, Per 48A  | 0 hr     | 0 / 90 |
| TR    | Thermal Resistance Comparison              | per device specification, pre & post process change                     | 0 hr     | 0 / 30 |

デバイス名: **RURG80100**RMS: **J60342, U62626, O62627**パッケージ: **TO-247 2 AL SNGL PBF DS**

| テスト  | 仕様   | 条件  | 間隔       | 結果     |
|------|--|---|----------|--------|
| EV   | JEDS22 B101                                | External Visual, Device construction, marking, and workmanship          |          | 0/231  |
| HTRB | JESD22-A108                                | Ta = 175°C, 100% rated V  | 1008 hrs | 0/231  |
| HTSL | JESD22-A103                                | Ta = 175°C  | 1008 hrs | 0/231  |
| IOL  | MIL-STD-750 (M1037)<br>AEC-Q101            | Ta = +25°C, delta Tj=100°C<br>On/off = 5.0 min                          | 6000cyc  | 0/231  |
| TC   | JESD22-A104                                | Ta = -55°C to +150°C  | 1000 cyc | 0/231  |
| AC   | JESD22-A102                                | 121°C, 100% RH, 15.5psig, unbiased                                      | 96 hrs   | 0/231  |
| HAST | JESD22-A110                                | 130°C, 85% RH, 18.8psig, bias   | 96 hrs   | 0/231  |
| RSH  | JESD22- B106                               | Ta = 265°C, 10 sec  |          | 0/90   |
| SD   | JSTD002                                    | Ta = 245°C, 10 sec  |          | 0/45   |
| PD   | JESD22 B100                                | Per POD / Case Outline,<br>Verify physical dimensions to specifications | 0 hr     | 0/30   |
| SAT  | JESD22-A104, Appendix 6<br>J-STD-035       | Check Delamination  | 0 hr     | 0/22   |
| DPA  | AEC Q101-004 Section 4                     | Following TC  | 1008 hrs | 0/6    |
| DPA  | AEC Q101-004 Section 4                     | Following HAST  | 1008 hrs | 0/6    |
| ED   | Electrical Distribution / Characterization | Tri Temperature, Per 48A  | 0 hr     | 0 / 90 |
| TR   | Thermal Resistance Comparison              | per device specification, pre & post process change                     | 0 hr     | 0 / 30 |



## 電気的特性の要約:

電気的特性への影響はありません。

## 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     |
|----------------|---------------|
| FDH047AN08A0   | FDH50N50-F133 |
| FDH3632        | FDH50N50-F133 |
| FDH45N50F-F133 | FDH50N50-F133 |
| FDH50N50-F133  | FDH50N50-F133 |
| HUF75344G3     | FDH50N50-F133 |
| HUF75345G3     | FDH50N50-F133 |
| HUF75639G3     | FDH50N50-F133 |
| HUF75852G3     | FDH50N50-F133 |
| FDH44N50       | FDH50N50-F133 |
| FQH44N10-F133  | FDH50N50-F133 |
| FFH30US30DN    | RURG80100     |
| FFH50US60S     | RURG80100     |
| FFH60UP40S     | RURG80100     |
| FFH75H60S      | RURG80100     |
| ISL9K1560G3    | RURG80100     |
| ISL9R18120G2   | RURG80100     |
| ISL9R30120G2   | RURG80100     |
| RHRG1560CC     | RURG80100     |
| RHRG3060       | RURG80100     |
| RURG1520CC     | RURG80100     |
| RURG3020CC     | RURG80100     |
| RURG3060CC     | RURG80100     |
| RURG80100      | RURG80100     |

**Appendix A: Changed Products****PCN#: FPCN22647XBC**  
**Issue Date: May 11, 2021**

| Product        | Customer Part Number | Qualification Vehicle | New Part Number | Replacement Supplier |
|----------------|----------------------|-----------------------|-----------------|----------------------|
| FDH3632        |                      | FDH50N50-F133         | NA              |                      |
| FDH50N50-F133  |                      | FDH50N50-F133         | NA              |                      |
| HUF75344G3     |                      | FDH50N50-F133         | NA              |                      |
| HUF75345G3     |                      | FDH50N50-F133         | NA              |                      |
| HUF75639G3     |                      | FDH50N50-F133         | NA              |                      |
| FDH44N50       |                      | FDH50N50-F133         | NA              |                      |
| FFH60UP40S     |                      | RURG80100             | NA              |                      |
| FFH75H60S      |                      | RURG80100             | NA              |                      |
| ISL9K1560G3    |                      | RURG80100             | NA              |                      |
| ISL9R18120G2   |                      | RURG80100             | NA              |                      |
| ISL9R30120G2   |                      | RURG80100             | NA              |                      |
| RHRG1560CC     |                      | RURG80100             | NA              |                      |
| RHRG3060       |                      | RURG80100             | NA              |                      |
| RURG1520CC     |                      | RURG80100             | NA              |                      |
| RURG3020CC     |                      | RURG80100             | NA              |                      |
| RURG3060CC     |                      | RURG80100             | NA              |                      |
| RURG80100      |                      | RURG80100             | NA              |                      |
| FDH45N50F-F133 |                      | FDH50N50-F133         | NA              |                      |