



|   |   |                                 |
|---|---|---------------------------------|
| <b>Title of Change:</b>   | Mold compound change due to End of Life of Samsung SDI molding compound - Batch 8   |                                 |
| <b>Proposed Changed Material First Ship Date:</b>   | 1 October 2020  |                                 |
| <b>Current Material Last Order Date:</b>  | NA  |                                 |
| <b>Current Material Last Delivery Date:</b>   | NA  |                                 |
| <b>Product Category:</b>  | Active components – Discrete components   |                                 |
| <b>Contact information:</b>   | Contact your local ON Semiconductor Sales Office or <PCN.Support@onsemi.com>  |                                 |
| <b>Samples:</b>   | <p>Contact your local ON Semiconductor Sales Office to place sample order or &lt;PCN.samples@onsemi.com&gt;</p> <p>Sample requests are to be submitted no later than 45 days after publication of this change notification.</p> <p>Samples delivery timing will be subject to request date, sample quantity and special customer packing/label requirements.</p>  |                                 |
| <b>Additional Reliability Data:</b>   | Contact your local ON Semiconductor Sales Office or < Frank.Tuan@onsemi.com>  |                                 |
| <b>Type of Notification:</b>  | <p>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.</p> <p>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 12 months prior to implementation of the change. In case of questions, contact &lt;PCN.Support@onsemi.com&gt;.</p> |                                 |
| <b>Change Category</b>  | <b>Type of Change</b>   |                                 |
| Process – Assembly  | Change of mold compound   |                                 |
| <b>Description and Purpose:</b>   |   |                                 |
| <p>ON Semiconductor would like to inform its customers of a change in the mold compound for the devices listed in this IPCN. This change is a result of an end of life notification received for Samsung SDI EMC. The replacement mold compound is still being decided for many packages and will be declared on the Final Product Change Notification.</p> |   |                                 |
|   | <b>Before Change Description</b>  | <b>After Change Description</b> |
| Mold Compound (TO220-2L, 3L, 4L Package)  | Samsung SL7300HFM/SG8200DL  | TBD                             |
| Mold Compound (TO247-2L, 3L, 4L Package)  | Samsung SG8200DL/SL7300HFM  | TBD                             |
| <p>The qualifications will be completed as quickly as possible, but due to the number of qualifications being performed, multiple Final Product Change Notifications (FPCNs) will be released to customers as the various packages/locations are qualified.</p> <p>There is no product marking change as a result of this change.</p>                       |   |                                 |
| <b>Reason / Motivation for Change:</b>  | This change is required as a result of Samsung’s decision to discontinue production of the mold compounds identified above. ON Semiconductor will no longer be able to produce the impacted products with this mold compound after the current supply has been utilized.  |                                 |
| <b>Anticipated impact on fit, form, function, reliability, product safety or manufacturability:</b>   | No functional, form, fit, product safety, or manufacturability changes. The device will be qualified and validated based on the same Product Specification.   |                                 |



|   |   |   |                   |                  |
|---|---|---|-------------------|------------------|
| <b>Sites Affected:</b>  | ON Semiconductor Sites:<br>ON Suzhou, China                                     | External Foundry/Subcon Sites:<br>None  |                   |                  |
| <b>Marking of Parts/ Traceability of Change:</b>  | Product with date code TBD or newer will be assembled with a new mold compound. |   |                   |                  |
| <b>Reliability Data Summary:</b>  |   |   |                   |                  |
| All Packages will follow the generic plans shown below based on Package type and application: |   |   |                   |                  |
| <b>Qual vehicle</b>   | <b>Package</b>  | <b>Qual vehicle</b>   | <b>Package</b>    |                  |
| FDPO20N06B-SN00330  | TO220(2L,3L,4L)   | FGY160T65SPD-F085   | TO247(2L,3L,4L)   |                  |
| FDP8440   |   | HUF75852G3  |                   |                  |
| MTP3055VL   |   | FGH75N60UFTU  |                   |                  |
| FDP12N60NZ  |   | FGH30N60LSDTU   |                   |                  |
| FDP42AN15A0-SB82024A  |   | FGH30S150P  |                   |                  |
| FCP104N60   |   | RHRG75120   |                   |                  |
| FDP8D5N10C  |   | FFSH40120ADN-F085   |                   |                  |
| FDP8030L  |   | SVHL080N120SC1  |                   |                  |
| RURP15100-F085P   |   | FGY75T120SQDN   |                   |                  |
| HGTP20N60A4   |   | NVHL040N65S3F   |                   |                  |
| KSC5603DTU  |   | FCH023N65S3-F155  |                   |                  |
| TIP42CTU-F129   |   | FCH041N60F-F085   |                   |                  |
| NDP6020P  |   |   |                   |                  |
| FFSP3065B-F085  |   |   |                   |                  |
| FYP2010DNTU   |   |   |                   |                  |
| <b>Test</b>   |   | <b>Specification</b>  |                   | <b>Condition</b> |
| HTRB  | JESD22-A108   | Tj = Max rate Tj for device, bias = 100% of max rated   | 1008 hrs          | TBD              |
| HTGB(MOSFET/IGBT only, not applicable to diode and BJT)                                       | JESD22-A108   | Ti = Maximum rated junction temperature for 1008 hrs, Vgss Bias = 100% of max rated   | 1008 hrs          | TBD              |
| HTSL  | JESD22-A103   | Ta = Maximum storage temperature for 1008 hrs   | 1008 hrs          | TBD              |
| IOL   | M 1037 M 1037   | Ta=+25°C, deltaTj=100°C max, Ton=Toff is 3.5min   |                   | TBD              |
| TC  | JESD22-A104   | Ta = -55°C to +150°C  | 1000 cyc          | TBD              |
| H3TRB or HAST   | JESD22-A110   | Temp = 85C, RH=85%, bias = 100V max or 96 hours at TA=130°C/85%RH, or 264hrs TA=110°C /85%RH with part reverse bias at 80% of rated voltage upto a voltage above which arcing in the chamber will likely occur (typically 42V). | 1008 hrs or 96hrs | TBD              |
| RSH   | JESD22- B106  | Ta = 265C, 10 sec   | NA                | TBD              |
| SD  | JSTD002   | Ta = 245C, 10 sec   | NA                | TBD              |
| <b>Electrical Characteristic Summary:</b>   |   |   |                   |                  |
| 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](#).

| Current Part Number | New Part Number | Qualification Vehicle |
|---------------------|-----------------|-----------------------|
| FCH041N60F-F085     | NA              | FCH041N65F-F085       |
| FCH041N65F-F085     | NA              | FCH041N65F-F085       |
| FCH072N60F-F085     | NA              | FCH041N65F-F085       |
| FCH077N65F-F085     | NA              | FCH041N65F-F085       |
| FCH104N60F-F085     | NA              | FCH041N65F-F085       |
| FFH50US60S-F085     | NA              | RHRG75120             |
| FFSH10120A-F085     | NA              | FFSH40120ADN-F085     |
| FFSH1065B-F085      | NA              | FFSH40120ADN-F085     |
| FFSH20120ADN-F085   | NA              | FFSH40120ADN-F085     |
| FFSH20120A-F085     | NA              | FFSH40120ADN-F085     |
| FFSH2065BDN-F085    | NA              | FFSH40120ADN-F085     |
| FFSH2065B-F085      | NA              | FFSH40120ADN-F085     |
| FFSH3065B-F085      | NA              | FFSH40120ADN-F085     |
| FFSH40120ADN-F085   | NA              | FFSH40120ADN-F085     |
| FFSH4065BDN-F085    | NA              | FFSP3065B-F085        |
| FFSH5065B-F085      | NA              | FFSH5065B-F085        |
| FFSP1065B-F085      | NA              | FFSP3065B-F085        |
| FFSP2065BDN-F085    | NA              | FFSH2065BDN-F085      |
| FFSP2065B-F085      | NA              | FFSP3065B-F085        |
| FFSP3065B-F085      | NA              | FFSP3065B-F085        |
| FFSP4065BDN-F085    | NA              | FFSP3065B-F085        |
| FGY120T65SPD-F085   | NA              | FGY160T65SPD-F085     |
| FGY160T65SPD-F085   | NA              | FGY160T65SPD-F085     |
| ISL9R1560G2-F085    | NA              | RHRG75120             |
| ISL9R1560P2-F085    | NA              | RURP15100-F085P       |
| ISL9R3060G2-F085    | NA              | RHRG75120             |
| NVHL080N120SC1      | NA              | SVHL080N120SC1        |
| NVHL025N65S3        | NA              | NVHL040N65S3F         |
| NVHL027N65S3F       | NA              | NVHL040N65S3F         |



|                 |    |                 |
|-----------------|----|-----------------|
| NVHL040N65S3F   | NA | NVHL040N65S3F   |
| NVHL072N65S3    | NA | NVHL040N65S3F   |
| NVHL080N120SC1  | NA | SVHL080N120SC1  |
| NVHL082N65S3F   | NA | NVHL040N65S3F   |
| NVHL110N65S3F   | NA | NVHL040N65S3F   |
| RHRG1560CC-F085 | NA | RHRG75120       |
| RHRG1560-F085   | NA | RHRG75120       |
| RHRG3060-F085   | NA | RHRG75120       |
| RHRG5060-F085   | NA | RHRG75120       |
| RURG3060CC-F085 | NA | RHRG75120       |
| RURG3060-F085   | NA | RHRG75120       |
| RURG5060-F085   | NA | RHRG75120       |
| RURG80100-F085  | NA | RHRG75120       |
| RURG8060-F085   | NA | RHRG75120       |
| RURP15100-F085  | NA | RURP15100-F085P |
| RURP15100-F085P | NA | RURP15100-F085P |
| RURP1560-F085   | NA | RURP15100-F085P |
| RURP1560-F085P  | NA | RURP15100-F085P |

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。



## 初回製品 / プロセス変更通知

文書番号# : IPCN22647Z

発行日 : 14 June 2019

|  |   |               |
|--|---|---------------|
| 変更件名:  | 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- バッチ 8   |               |
| 初回出荷予定日:   | 1 October 2020  |               |
| 現在の材料の最終注文日:   | 該当なし  |               |
| 現在の材料の最終出荷日:   | 該当なし  |               |
| 製品カテゴリ:  | アクティブなコンポーネント - 個別コンポーネント   |               |
| 連絡先情報:   | 現地のオン・セミコンダクター営業所または <PCN.Support@onsemi.com> 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に注文するか、または<PCN.samples@onsemi.com>にお問い合わせください。サンプルは、この変更通知の発行から 45 日以内に要求してください。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:   | お客様の地域のオン・セミコンダクター営業所または<Frank.Tuan@onsemi.com>にお問い合わせください。   |               |
| 通知種別:  | これは、お客様宛の初回製品 / プロセス変更通知 (IPCN) です。IPCN は、近日中に実施される変更に関する事前通知であり、変更の詳細および影響を受けるデバイスについての一般情報が記載されます。また、暫定的な信頼性認証計画も記載されます。<br>最終的な認定データおよび特性データは最終製品 / プロセス変更通知 (FPCN) に含まれます。この IPCN は、変更実施から少なくとも 12 か月前に発行される最終製品 / プロセス変更通知 (FPCN) に先だって通知されます。ご不明な点がありましたら、<PCN.Support@onsemi.com> にお問い合わせください。 |               |
| 変更カテゴリ:  | <b>変更種別</b>   |               |
| プロセス - 組み立て  | モールドコンパウンドの変更   |               |
| <b>説明および目的:</b>  |   |               |
| <p>オン・セミコンダクターは、本 IPCN に記載された製品におけ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。この変更は、Samsung SDI EMC から受領した生産終了の通知によるものです。代替のモールドコンパウンドは、多くのパッケージ用に使用すると決定されているもので、最終製品変更通知にて公表されます。</p> |   |               |
|  | <b>変更前の表記</b>   | <b>変更後の表記</b> |
| モールド・コンパウンド<br>(TO220- 2L, 3L, 4L パッケージ)   | Samsung SL7300HFM/SG8200DL  | TBD           |
| モールド・コンパウンド<br>(TO247- 2L, 3L, 4L パッケージ)   | Samsung SG8200DL/SL7300HFM  | TBD           |
| <p>認定に関してはできる限り早急に完了する予定ですが、各種パッケージ/場所が認定されることになり、実施される認定が多数になるため、複数の最終製品変更通知 (FPCNs) がお客様に発行されることとなります。</p> <p>今回の変更に伴う製品マーキングの変更はありません。</p>                            |   |               |
| 変更の理由 / 動機:  | この変更は、Samsung が上記のモールドコンパウンドの製造中止を決定した結果として必要になりました。現在の供給分を使用し終えた後は、オン・セミコンダクターは、影響を受ける製品をこのモールドコンパウンドで製造できなくなります。  |               |
| 適合性、形状、機能、信頼性、製品安全性、または製造可能性に関して見込まれる影響  | 機能、形状、適合性、製品安全性、または製造性には変更はありません。製品は同じ製品規格に基づいて認定および検証されます。   |               |



|   |  |   |                   |           |
|---|--|---|-------------------|-----------|
| 影響を受ける拠点:   | オン・セミコンダクター拠点:<br>ON Suzhou, China       | 外部製造工場 / 下請業者拠点:<br>なし  |                   |           |
| 部品の表示 / 変更の追跡可能性:                                       | 日付コード TBD 以降の製品は、新しいモールドコンパウンドで組み立てられます。 |   |                   |           |
| <b>信頼性データの要約:</b>                                       |  |   |                   |           |
| すべてのパッケージは、パッケージタイプおよびアプリケーションに基づき以下に示す一般計画に従います。       |  |   |                   |           |
| <b>デバイス名</b>  | <b>パッケージ</b>                             | <b>デバイス名</b>  | <b>パッケージ</b>      |           |
| FDP020N06B-SN00330                                      | TO220(2L,3L,4L)                          | FGY160T65SPD-F085   | TO247(2L,3L,4L)   |           |
| FDP8440   |  | HUF75852G3  |                   |           |
| MTP3055VL   |  | FGH75N60UFTU  |                   |           |
| FDP12N60NZ  |  | FGH30N60LSDTU   |                   |           |
| FDP42AN15A0-SB82024A                                    |  | FGH30S150P  |                   |           |
| FCP104N60   |  | RHRG75120   |                   |           |
| FDP8D5N10C  |  | FFSH40120ADN-F085   |                   |           |
| FDP8030L  |  | SVHL080N120SC1  |                   |           |
| RURP15100-F085P   |  | FGY75T120SQDN   |                   |           |
| HGTP20N60A4   |  | NVHL040N65S3F   |                   |           |
| KSC5603DTU  |  | FCH023N65S3-F155  |                   |           |
| TIP42CTU-F129   |  | FCH041N60F-F085   |                   |           |
| NDP6020P  |  |   |                   |           |
| FFSP3065B-F085  |  |   |                   |           |
| FYP2010DNTU   |  |   |                   |           |
| <b>テスト</b>  |  | <b>仕様</b>   |                   | <b>条件</b> |
| HTRB  | JESD22-A108                              | Tj = Max rate Tj for device, bias = 100% of max rated   | 1008 hrs          | TBD       |
| HTGB(MOSFET/IGBT only, not applicable to diode and BJT) | JESD22-A108                              | Ti = Maximum rated junction temperature for 1008 hrs, Vgss Bias = 100% of max rated   | 1008 hrs          | TBD       |
| HTSL  | JESD22-A103                              | Ta = Maximum storage temperature for 1008 hrs   | 1008 hrs          | TBD       |
| IOL   | M 1037 M 1037                            | Ta=+25°C, deltaTj=100°C max, Ton=Toff is 3.5min   |                   | TBD       |
| TC  | JESD22-A104                              | Ta = -55°C to +150°C  | 1000 cyc          | TBD       |
| H3TRB or HAST   | JESD22-A110                              | Temp = 85C, RH=85%, bias = 100V max or 96 hours at TA=130°C/85%RH, or 264hrs TA=110°C /85%RH with part reverse bias at 80% of rated voltage upto a voltage above which arcing in the chamber will likely occur (typically 42V). | 1008 hrs or 96hrs | TBD       |
| RSH   | JESD22- B106                             | Ta = 265C, 10 sec   | NA                | TBD       |
| SD  | JSTD002                                  | Ta = 245C, 10 sec   | NA                | TBD       |
| <b>電気的特性の要約:</b>  |  |   |                   |           |
| 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: 標準の部品番号(既製品)のみが部品一覧に記載されます。本 PCN に影響を受けるカスタム 部品は、PCN メール顧客の特定の PCN の付属文書、または PCN カスタマイズポータルに記載されています。

| 現在の部品番号           | 新部品番号 | 認定試験用ピークル         |
|-------------------|-------|-------------------|
| FCH041N60F-F085   | NA    | FCH041N65F-F085   |
| FCH041N65F-F085   | NA    | FCH041N65F-F085   |
| FCH072N60F-F085   | NA    | FCH041N65F-F085   |
| FCH077N65F-F085   | NA    | FCH041N65F-F085   |
| FCH104N60F-F085   | NA    | FCH041N65F-F085   |
| FFH50US60S-F085   | NA    | RHRG75120         |
| FFSH10120A-F085   | NA    | FFSH40120ADN-F085 |
| FFSH1065B-F085    | NA    | FFSH40120ADN-F085 |
| FFSH20120ADN-F085 | NA    | FFSH40120ADN-F085 |
| FFSH20120A-F085   | NA    | FFSH40120ADN-F085 |
| FFSH2065BDN-F085  | NA    | FFSH40120ADN-F085 |
| FFSH2065B-F085    | NA    | FFSH40120ADN-F085 |
| FFSH3065B-F085    | NA    | FFSH40120ADN-F085 |
| FFSH40120ADN-F085 | NA    | FFSH40120ADN-F085 |
| FFSH4065BDN-F085  | NA    | FFSP3065B-F085    |
| FFSH5065B-F085    | NA    | FFSH5065B-F085    |
| FFSP1065B-F085    | NA    | FFSP3065B-F085    |
| FFSP2065BDN-F085  | NA    | FFSH2065BDN-F085  |
| FFSP2065B-F085    | NA    | FFSP3065B-F085    |
| FFSP3065B-F085    | NA    | FFSP3065B-F085    |
| FFSP4065BDN-F085  | NA    | FFSP3065B-F085    |
| FGY120T65SPD-F085 | NA    | FGY160T65SPD-F085 |
| FGY160T65SPD-F085 | NA    | FGY160T65SPD-F085 |
| ISL9R1560G2-F085  | NA    | RHRG75120         |
| ISL9R1560P2-F085  | NA    | RURP15100-F085P   |
| ISL9R3060G2-F085  | NA    | RHRG75120         |
| NVH4L080N120SC1   | NA    | SVHL080N120SC1    |
| NVHL025N65S3      | NA    | NVHL040N65S3F     |
| NVHL027N65S3F     | NA    | NVHL040N65S3F     |





## 初回製品 / プロセス変更通知

文書番号# : IPCN22647Z

発行日 :: 14 June 2019

|                 |    |                 |
|-----------------|----|-----------------|
| NVHL040N65S3F   | NA | NVHL040N65S3F   |
| NVHL072N65S3    | NA | NVHL040N65S3F   |
| NVHL080N120SC1  | NA | SVHL080N120SC1  |
| NVHL082N65S3F   | NA | NVHL040N65S3F   |
| NVHL110N65S3F   | NA | NVHL040N65S3F   |
| RHRG1560CC-F085 | NA | RHRG75120       |
| RHRG1560-F085   | NA | RHRG75120       |
| RHRG3060-F085   | NA | RHRG75120       |
| RHRG5060-F085   | NA | RHRG75120       |
| RURG3060CC-F085 | NA | RHRG75120       |
| RURG3060-F085   | NA | RHRG75120       |
| RURG5060-F085   | NA | RHRG75120       |
| RURG80100-F085  | NA | RHRG75120       |
| RURG8060-F085   | NA | RHRG75120       |
| RURP15100-F085  | NA | RURP15100-F085P |
| RURP15100-F085P | NA | RURP15100-F085P |
| RURP1560-F085   | NA | RURP15100-F085P |
| RURP1560-F085P  | NA | RURP15100-F085P |