



Title of Change:	Mold Compound Change attributed to an End of Life of Samsung SDI EMC for products in TO247 package.	
Proposed Changed Material First Ship Date:	24 September 2020	
Current Material Last Order Date:	30 May 2020 Orders received after the Current Material Last Order Date expiration are to be considered as orders for new changed material as described in this PCN. Orders for current (unchanged) material after this date will be per mutual agreement and current material inventory availability.	
Current Material Last Delivery Date:	23 September 2020 The Current Material Last Delivery Date may be subject to change based on build and depletion of the current (unchanged) material inventory.	
Product Category:	Active components – Discrete components	
Contact information:	Contact your local ON Semiconductor Sales Office or <Peter.lee@onsemi.com>	
Samples:	Contact your local ON Semiconductor Sales Office to place sample order or <PCN.samples@onsemi.com> Sample requests are to be submitted no later than 45 days after publication of this change notification.	
Sample Availability Date:	31 October 2019 Samples delivery timing will be subject to request date, sample quantity and special customer packing/label requirements.	
PPAP Availability Date:	1 October 2019	
Additional Reliability Data:	Contact your local ON Semiconductor Sales Office or <Frank.Tuan@onsemi.com> .	
Type of Notification:	This is a Final Product/Process Change Notification (FPCN) sent to customers. FPCNs are issued 12 months prior to implementation of the change or earlier upon customer approval. ON Semiconductor will consider this proposed change and it's conditions acceptable, unless an inquiry is made in writing within 45 days of delivery of this notice. To do so, contact PCN.Support@onsemi.com.	
Change Category	Type of Change	
Process – Assembly	Change of mold compound	
Description and Purpose:		
<p>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.</p> <p>All other aspects of the impacted products (form, fit, function) will remain unchanged.</p>		
	Before Change Description	After Change Description
Mold compound	SG8200DL, Supplier: Samsung SDI	KTMC1050GFA
There is no product marking change as a result of this change		
Reason / Motivation for Change:	<ul style="list-style-type: none"> - The motivation of change is to have better capacity support mass production - Late release from customer has potential supply issue. 	



Anticipated impact on fit, form, function, reliability, product safety or manufacturability	The device has been qualified and validated based on the same Product Specification. The device has successfully passed the qualification tests. Potential impacts can be identified, but due to testing performed by ON Semiconductor in relation to the PCN, associated risks are verified and excluded. No anticipated impacts.	
Sites Affected:	ON Semiconductor Sites: ON Suzhou, China	External Foundry/Subcon Sites: None
Marking of Parts/ Traceability of Change:	Customer may receive the parts from ON Semiconductor from month of 30 August 2020 onwards once FPCN expire. Parts from ON Semiconductor can be identified through product marking which follow ON Semiconductor marking format.	

Reliability Data Summary:Device : SVHL080N120SC1RMS : U56692PACKAGE : TO247

Test	Specification	Condition	Interval	Results
HTRB	JESD22-A108	Ta = 175°C for device, bias = 100% of max rated	1008 hrs	0/231
HTGB	JESD22-A108	Ta = 175°C for 1008 hours, 100% rated Vgs	1008 hrs	0/231
HTSL	JESD22-A103	Ta = 175°C for 1008 hours	1008 hrs	0/231
TC	JESD22-A104	Temp = -55°C to +150°C; for 1000 cycles	1000 cyc	0/231
IOL	MIL STD750, M 1037 AEC Q101	Ta=+25°C, delta Tj=100°C max, Ton=Toff is 3.5min	8572Cyc	0/231
HAST	JESD22 A110	Temp= +110°C, RH=85% , 264hr, bias = 80% of rated BV or 100V max	264hrs	0/231
RSH	JESD22-B106	265 °C Immersion and 10s	10s	0/30
SD	J STD 002	Ta=245°C 5 sec dwell	5s	0/45
PD		Per Case Outline		0/30
Tri-temp		Tri-Temp Characterization, Per 48A		0/90
TR		Thermal Resistance		0/30
CDPA TCDT	AEC Q101, rev D, test 7A (alt)	Custom Destructive Physical Analysis - TC Delamination Test, Post 1000 cyc TC		0/66
CDPA SAT	AEC-006	Post HTRB,HTGB		0/66
DPA	AEC-Q101-004 Section 4	Destructive Physical Analysis Post TC, HAST, HTRB, HTGB		0/6
CDPA WP BS	MIL 883E, AEC -006	Custom Destructive Physical Analysis - Wire Pull, Ball Shear Post TC, HTRB, HTGB		0/18
CDPA X Section	AEC -006	Post TC, HTRB, HTGB		0/9
Shift		Shift Analysis for HTRB/HTGB/HTSL/TC/IOL/HAST		Pass



Device : FFSH40120ADN-F085

RMS : U56690

PACKAGE : TQ247

Test	Specification	Condition	Interval	Results
HTRB	JESD22-A108	Ta = 175°C for device, bias = 100% of max rated	1008 hrs	0/231
HTSL	JESD22-A103	Ta = 175°C for 1008 hours	1008 hrs	0/231
TC	JESD22-A104	Temp = -55°C to +150°C; for 1000 cycles	1000 cyc	0/231
HAST	JESD22 A110	Temp= +110°C, RH=85% , 264hr, bias = 80% of rated BV or 100V max	264hrs	0/231
RSH	JESD22-B106	265 °C Immersion and 10s	10s	0/30
SD	J STD 002	Ta=245°C 5 sec dwell	5s	0/45
PD		Per Case Outline		0/30
Tri-temp		Tri-Temp Characterization, Per 48A		0/90
TR		Thermal Resistance		0/30
CDPA TCDT	AEC Q101, rev D, test 7A (alt)	Custom Destructive Physical Analysis - TC Delamination Test, Post 1000 cyc TC		0/66
CDPA SAT	AEC-006	Post HTRB		0/66
DPA	AEC-Q101-004 Section 4	Destructive Physical Analysis Post TC, HAST, HTRB		0/6
CDPA WP BS	MIL 883E, AEC -006	Custom Destructive Physical Analysis - Wire Pull, Ball Shear Post TC, HTRB		0/18
CDPA X Section	AEC -006	Post TC, HTRB		0/9
Shift		Shift Analysis for HTRB/HTSL/TC/HAST		Pass

Note: AEC-1pager is attached.

To view attachments:

1. Download pdf copy of the PCN to your computer
2. Open the downloaded pdf copy of the PCN
3. Click on the paper clip icon available on the menu provided in the left/bottom portion of the screen to reveal the Attachment field
4. Then click on the attached file/s

Electrical Characteristic 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](#).

Current Part Number	Qualification Vehicle
FFSH10120A-F085	FFSH40120ADN-F085
FFSH20120ADN-F085	FFSH40120ADN-F085
FFSH20120A-F085	FFSH40120ADN-F085
FFSH2065BDN-F085	FFSH40120ADN-F085
FFSH3065B-F085	FFSH40120ADN-F085
FFSH40120ADN-F085	FFSH40120ADN-F085
FFSH1065B-F085	FFSH40120ADN-F085
NVHL080N120SC1	SVHL080N120SC1
FFSH2065B-F085	FFSH40120ADN-F085
FFSH4065BDN-F085	FFSH40120ADN-F085
FFSH5065B-F085	FFSH40120ADN-F085
FFSH1265BDN-F085	FFSH40120ADN-F085



Appendix A: Changed Products

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Product	Customer Part Number	New Part Number	Qualification Vehicle
FFSH10120A-F085		NA	FFSH40120ADN-F085
FFSH1065B-F085		NA	FFSH40120ADN-F085
FFSH20120A-F085		NA	FFSH40120ADN-F085
FFSH20120ADN-F085		NA	FFSH40120ADN-F085
FFSH2065B-F085		NA	FFSH40120ADN-F085
FFSH2065BDN-F085		NA	FFSH40120ADN-F085
FFSH3065B-F085		NA	FFSH40120ADN-F085
FFSH40120ADN-F085		NA	FFSH40120ADN-F085
FFSH4065BDN-F085		NA	FFSH40120ADN-F085
FFSH5065B-F085		NA	FFSH40120ADN-F085
NVHL080N120SC1		NA	SVHL080N120SC1