



<b>Title of Change:</b>	Mold compound change attributed to an End of life of Samsung EMC for TO247 package/Qualification of Automotive FS3 trench IGBT technology in AIZU site as dual source.	
<b>Proposed Changed Material First Ship Date:</b>	22 Apr 2021 or earlier if approved by customer	
<b>Current Material Last Order Date:</b>	30 Apr 2020 <i>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.</i>	
<b>Current Material Last Delivery Date:</b>	31 May 2020 <i>The Current Material Last Delivery Date may be subject to change based on build and depletion of the current (unchanged) material inventory</i>	
<b>Product Category:</b>	Active components – Integrated circuits	
<b>Contact information:</b>	Contact your local ON Semiconductor Sales Office or <a href="mailto:Daisy.Zhi@onsemi.com">Daisy.Zhi@onsemi.com</a>	
<b>PCN Samples Contact:</b>	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. Samples delivery timing will be subject to request date, sample quantity and special customer packing/label requirements.	
<b>Sample Availability Date:</b>	30 Jun 2020	
<b>PPAP Availability Date:</b>	30 Jun 2020	
<b>Additional Reliability Data:</b>	Contact your local ON Semiconductor Sales Office or <a href="mailto:Frank.Tuan@onsemi.com">Frank.Tuan@onsemi.com</a>	
<b>Type of Notification:</b>	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.	
<b>Change Category</b>		
<b>Category</b>	<b>Type of Change</b>	
Process - Wafer Production	Move of all or part of wafer fab to a different location/site/subcontractor Change of gate material / dielectrics	
Process - Assembly	Change of encapsulation/sealing material	
<b>Description and Purpose:</b>		
Add 1 OPN of AFGY160T65SPD-B4 that same as QV FGY160T65SPD due to customer request separate test bin and change EMC. 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.		
	<b>Before Change Description</b>	<b>After Change Description</b>
Mold Compound	SL7300HFM, Supplier: Samsung SDI SG8200DL, Supplier: Samsung SDI	KTMC1050GFA
This final change notification (FPCN) also announces to customers the qualification of additional wafer fabrication facility for automotive FS3 TIGBT technology in Aizu Fujitsu Semiconductor Manufacturing (AFSM) located in Aizu, Japan. Upon the expiration of this notification, all products listed here will be dual sourced from its current wafer fab facility in ON Semiconductor wafer fab in Bucheon, Korea and AFSM, Japan.		



Qualification tests are designed to show that the reliability of the affected devices will continue to meet or exceed ON Semiconductor standards, with no form, fit or functions alterations

	Before Change Description	After Change Description
Wafer Fab Site	ON Semiconductor Bucheon, Korea	ON Semiconductor Bucheon, Korea ON Semiconductor Aizu, Japan (AFSM)

There is no product marking change as a result of this change.

Reason / Motivation for Change:	Source/Supply/Capacity Changes Process/Materials Change
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	External Foundry/Subcon Sites
ON Semiconductor Aizu, Japan	None
ON Semiconductor Bucheon, Korea	
ON Semiconductor Suzhou, China	

Marking of Parts/ Traceability of Change:	Customer may receive the parts from ON Semiconductor from month of 31 December 2020 onwards once FPCN expire. The affected products will be identified by date code.
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#### Reliability Data Summary:

QV DEVICE NAME: FGY160T65SPD-F085

RMS : U60027

PACKAGE : TP247

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	Ta=+25°C, delta Tj=100°C max, Ton=Toff is 3.5min	8572Cyc	0/231
	AEC Q101			
H3TRB	JESD22-A101	Temp = 85°C, RH=85%, bias = 80% of rated V or 100V max	1008hrs	0/231
RSH	JESD22-B106	265 °C Immersion and 10s	10s	0/30
SD	J STD 002B	Ta=245°C 5 sec dwell	5s	0/45
PD		Per Case Outline		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		0/6
		Post TC, H3TRB, HTRB, HTGB		
CDPA WP BS	MIL 883E, AEC -006	Custom Destructive Physical Analysis - Wire Pull, Ball Shear		0/18
		Post TC, HTRB, HTGB		
CDPA X Section	AEC -006	Post TC, HTRB, HTGB		0/9



**NOTE:** AEC 1 Pager 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 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](#).

Current Part Number	New Part Number	Qualification Vehicle
AFGY160T65SPD-B4	NA	FGY160T65SPD-F085