ON Semiconductor®

Final Product/Process Change Notification

Document # : FPCN22647XI
Issue Date: 23 September 2019

Title of Change:	Mold Compound Change attributed to an End of Life of Samsung SDI EMC for products in TO247 Package
Proposed first ship date:	30 December 2019
Contact information:	Contact your local ON Semiconductor Sales Office or PCN.Support@onsemi.com
Samples:	Contact your local ON Semiconductor Sales Office or <PCN.samples@onsemi.com>, <Bokyun.Seo@onsemi.com>. Sample requests are to be submitted no later than 30 days from the date of first notification, IPCN or Final PCN, for this change. Samples delivery timing will be subject to request date, sample quantity and special customer packing/label requirements.
Additional Reliability Data:	Contact your local ON Semiconductor Sales Office or PCN.Support@onsemi.com, <Lake.Wang@onsemi.com>, <Frank.Tuan@onsemi.com>
Type of notification:	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 <PCN.Support@onsemi.com>
Change Part Identification:	Product with date code 2010 or newer will be assembled with a new mold compound.
Change Category:	☐ Wafer Fab Change ☑ Assembly Change ☐ Test Change ☐ Other ________________

Change Sub-Category(s):

☐ Manufacturing Site Addition
☐ Manufacturing Site Transfer
☐ Manufacturing Process Change
☑ Material Change
☐ Product specific change
☐ Datasheet/Product Doc change
☐ Shipping/Packaging/Marking
☐ Other: ________________________________

Sites Affected:	ON Semiconductor Sites: ON Suzhou, China	External Foundry/Subcon Sites: None

Description and Purpose:

ON Semiconductor wishes to inform our customers of a change in mold compounds used for the devices listed in this PCN, following from the IPCN22467 series released earlier. This change is a result of an End of Life notification received from Samsung for several of their SDI Mold Compounds.
At the expiration of this PCN, the impacted products will use the new mold compound or the existing mold compound until all inventories are consumed.

	Before Change Description	After Change Description
Mold Compound (TO247-3 Package)	SG8200DL, Supplier: Samsung SDI	KTMC1050GFA
Mold Compound (TP247-3 Package)	SG8200DL/SL7300HFM, Supplier: Samsung SDI	KTMC1050GFA

All other aspects of the impacted products will remain unchanged. There is no form, fit, or function change, maintaining the same product marking of all the affected products.

Reliability Data Summary:

QV DEVICE NAME: FGY160T65SPD-F085
RMS: U56679
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 AEC Q101	Ta=+25°C, delta Tj=100°C max, Ton=Toff is 3.5min	8572Cyc	0/231
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 Post TC, H3TRB, 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

All reliability result passed

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**.

Part Number	Qualification Vehicle
FGH75T65SHD-F155	FGY160T65SPD-F085
FGH40T65SH-F155	FGY160T65SPD-F085
FGH60T65SHD-F155	FGY160T65SPD-F085
FGH75T65SHDTL4	FGY160T65SPD-F085
FGH75T65SHDT-F155	FGY160T65SPD-F085
FGH75T65SHDTLN4	FGY160T65SPD-F085
FGY100T65SCDT	FGY160T65SPD-F085