ON Semiconductor®

Final Product/Process Change Notification

Document #:FPCN22988Z
Issue Date:30 Apr 2020

Title of Change:	Qualification of DPAK 4 Row Transfer from Cebu to OSV and change in Green Mold compound.
Proposed Changed Material First Ship Date:	01 May 2021 or earlier if approved by customer
Current Material Last Order Date:	01 Feb 2021 *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:	30 Apr 2021 *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 Trung.Dang@onsemi.com
PCN Samples Contact:	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.
Sample Availability Date:	30 Jun 2020
PPAP Availability Date:	31 May 2020
Additional Reliability Data:	Contact your local ON Semiconductor Sales Office or ffxg4t@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

Category	Type of Change
Test Flow	Move of all or part of electrical wafer test and/or final test to a different location/site/subcontractor
Equipment	Production from a new equipment/tool which uses the same basic technology (replacement equipment or extension of existing equipment pool) without change of process.
Process - Assembly	Move of all or part of assembly to a different location/site/subcontractor., Change of mold compound

Description and Purpose:

This is a Final Change Notification to inform customers of the qualification of DPAK 4 Row transfer from ON Semiconductor Philippine (Cebu) to ON Semiconductor Vietnam (OSV) following changing in mold compound G700HF without plasma and AP coating process.

	Before Change Description	After Change Description
Assy and Final Test site	On semiconductor Philippine (Cebu)	On Semiconductor Vietnam (OSV)
Mold Compound	CEL8240HF10 (Hitachi)	G700HF (Sumitomo)
Process flow	Plasma, AP coating	No plasma, AP coating

Reason / Motivation for Change:	Capacity improvement
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 Vietnam	None

Marking of Parts/ Traceability of Change:	affected products with this changing will be identified with date code

Reliability Data Summary:

QV DEVICE NAME: FDD9510L-F085 (PT8P)
RMS# : V52986
PACKAGE : DPAK

Test	Specification	Condition	Interval	Result
HTRB	JESD22-A108	Ta = 175°C, bias = 100% of rated V	1008 hrs	0/231
HTGB	JESD22-A108	Ta = 175°C, 100% max rated Vgss	1008 hrs	0/231
HTSL	JESD22-A103	Ta = 175 °C	1008 hrs	0/231
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta = +25°C, deltaTj = 100°C max, Ton = Toff = 2min	15000 cyc	0/231
TC	JESD22-A104	Ta = -55°C to +150°C	1000 cyc	0/231
UHAST	JESD22-A102	130°C, 100% RH, 18.8psig, unbiased	96 hrs	0/231
H3TRB	JESD22-A101	85°C, 85% RH, bias = 100% of rated V	1008 hrs	0/231
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C		0/924
RSH	JESD22- B106	Ta = 265°C, 10 sec		0/90
SD	JSTD002	Ta = 245°C, 10 sec		0/45

QV DEVICE NAME: FDD9407-F085 (MV8N)
RMS# : V52983
PACKAGE : DPAK

Test	Specification	Condition	Interval	Result
HTRB	JESD22-A108	Ta = 175°C, bias = 100% of rated V	1008 hrs	0/231
HTGB	JESD22-A108	Ta = 175°C, 100% max rated Vgss	1008 hrs	0/231
HTSL	JESD22-A103	Ta = 175 °C	1008 hrs	0/231
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta = +25°C, deltaTj = 100°C max, Ton = Toff = 2min	15000 cyc	0/231
TC	JESD22-A104	Ta = -55°C to +150°C	1000 cyc	0/231
UHAST	JESD22-A102	130°C, 100% RH, 18.8psig, unbiased	96 hrs	0/231
H3TRB	JESD22-A101	85°C, 85% RH, bias = 100% of rated V	1008 hrs	0/231
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C		0/924
RSH	JESD22- B106	Ta = 265°C, 10 sec		0/90
SD	JSTD002	Ta = 245°C, 10 sec		0/45

QV DEVICE NAME: FGD2736G3-F085 (EcoSpark3)
RMS# : V52961
PACKAGE : DPAK

Test	Specification	Condition	Interval	Result
HTRB	JESD22-A108	Ta = 175°C, bias = 100% of rated V	1008 hrs	0/231
HTGB	JESD22-A108	Ta = 175°C, 100% max rated Vgss	1008 hrs	0/231
HTSL	JESD22-A103	Ta = 175 °C	1008 hrs	0/231
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta = +25°C, deltaTj = 100°C max, Ton = Toff = 2min	15000 cyc	0/231
TC	JESD22-A104	Ta = -55°C to +150°C	1000 cyc	0/231
UHAST	JESD22-A102	130°C, 100% RH, 18.8psig, unbiased	96 hrs	0/231
H3TRB	JESD22-A101	85°C, 85% RH, bias = 100V max	1008 hrs	0/231
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C		0/924
RSH	JESD22- B106	Ta = 265°C, 10 sec		0/90
SD	JSTD002	Ta = 245°C, 10 sec		0/45

QV DEVICE NAME: FGD3050G2 (EcoSpark2)
RMS# : V52960
PACKAGE : DPAK

Test	Specification	Condition	Interval	Result
HTRB	JESD22-A108	Ta = 175°C, bias = 100% of rated V	1008 hrs	0/231
HTGB	JESD22-A108	Ta = 175°C, 100% max rated Vgss	1008 hrs	0/231
HTSL	JESD22-A103	Ta = 175 °C	1008 hrs	0/231
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta = +25°C, deltaTj = 100°C max, Ton = Toff = 2min	15000 cyc	0/231
TC	JESD22-A104	Ta = -55°C to +150°C	1000 cyc	0/231
UHAST	JESD22-A102	130°C, 100% RH, 18.8psig, unbiased	96 hrs	0/231
H3TRB	JESD22-A101	85°C, 85% RH, bias = 100V max	1008 hrs	0/231
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C		0/924
RSH	JESD22- B106	Ta = 265°C, 10 sec		0/90
SD	JSTD002	Ta = 245°C, 10 sec		0/45

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 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
FDD9510L-F085	NA	FDD9510L-F085
FGD3050G2	NA	FGD3050G2
FGD2736G3-F085	NA	FGD2736G3-F085
FDD86580-F085	NA	FDD9407-F085
FDD9407L-F085	NA	FDD9407-F085
FDD86581-F085	NA	FDD9407-F085
FDD9410L-F085	NA	FDD9407-F085
FDD86567-F085	NA	FDD9407-F085
FDD9411L-F085	NA	FDD9407-F085
FDD9409L-F085	NA	FDD9407-F085
FDD86250-F085	NA	FDD9407-F085
FDD9507L-F085	NA	FDD9407-F085
FDD9509L-F085	NA	FDD9510L-F085
FDD9511L-F085	NA	FDD9510L-F085

Appendix A: Changed Products

D

Product	Customer Part Number	Qualification Vehicle	New Part Number	Replacement Supplier
FDD9510L-F085		FDD9510L-F085	NA	
FDD9407L-F085		FDD9407-F085	NA	
FDD86581-F085		FDD9407-F085	NA	
FDD86567-F085		FDD9407-F085	NA	
FDD9411L-F085		FDD9407-F085	NA	
FDD9409L-F085		FDD9407-F085	NA	
FGD2736G3-F085		FGD2736G3-F085	NA	
FDD86250-F085		FDD9407-F085	NA	
FDD9507L-F085		FDD9407-F085	NA	
FDD86580-F085		FDD9407-F085	NA	
FDD9509L-F085		FDD9510L-F085	NA	
FDD9511L-F085		FDD9510L-F085	NA	