ON Semiconductor®

Final Product/Process Change Notification

Document #:FPCN22729ZA
Issue Date:07 Nov 2019

Title of Change:	Assembly & Test site transfer of D2PAK products currently manufactured in ON Semiconductor Cebu Philippines facility to ON Semiconductor Suzhou, China facility.
Proposed Changed Material First Ship Date:	07 Nov 2020 or earlier if approved by customer
Current Material Last Order Date:	21 Jul 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:	06 Nov 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>
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:	N/A
PPAP Availability Date:	N/A
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

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 direct material supplier, Change of specified assembly process sequence (deletion and/or additional process step), Change of encapsulation/sealing material

Description and Purpose:

	Before Change Description	**After Change Description**
LeadFrame Supplier	Hitachi(Single row)	TSP(Dual row)
Mold Compound	MP195	KTMC5900GM
Assembly Site	ON Cebu, Philiphines	ON Suzhou, China
Test Site	ON Cebu, Philiphines	ON Suzhou, China
Process flow(Plasma cleaning + AP coating)	No	Yes

D2PAK package case outline is exactly same between Cebu &Suzhou.

	From	To
Product marking change	ON Semiconductor format Only assembly plant code change : D	ON Semiconductor format Only assembly plant code change : 1

For marking, There is no change on the device marking for Suzhou. However Suzhou will use the different Date code which is ON Format.

Equipment in receiving site may different with sending site, however all equipments are existing and qualified in mass production.

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 Cebu, Philippines	None
ON Semiconductor Suzhou, China	

Marking of Parts/ Traceability of Change:	Customer may receive the parts from ON Semiconductor Suzhou, China from month of June 2020 onwards once FPCN expire. Parts from ON Semiconductor Suzhou, China can be identified through product marking which follow ON Semiconductor marking format.

Reliability Data Summary:

Device: FDB075N15A-F085
PKG: D2PAK

Test	Specification	Condition	Interval	Result
HTRB	JESD22-A108	Tj = 150C, Bias = 100% of rated BV	1000hr	0/231
HTGB	JESD22-A108	Tj = 150C, Bias = 100% of rated Vgs	1000hr	0/231
PC	J STD 020 , JESD22-A113	MSL1, Reflow peak temp at 245C		0/231
TC + PC	JESD22-A104	Temp = -55°C to +150°C, t(dwell>15 min)	1000cyc	0/231
TCDT	JESD22 A104; Q101 appendix 6 J STD 035	100% C-SAM inspection after TC, follwed by decap, inspection or wire pull on all wires from 5 parts for 5 highest delaminated parts.		0/66
HAST + PC	JESD22-A110	85%RH, 110C, 42V	264hr	0/231
UHAST+ PC	JESD22-A118	85%RH, 110C	264hr	0/231
IOL	MIL-STD-750 Method 1037	Ta=25C DeltaTj=100C°, t(on)=t(off)= 3.5 min,	8572cyc	0/231
DPA	AEC Q101-004 Section 4	Post H3TRB or HAST and TC		0/6
PD	JESD22 B100	Verify physical dimensions to specifications		0/30
RSH	JESD22-B106	Ta=265C 10 sec dwell		0/30
SD	JSTD002	Ta=245C 10 sec dwell		0/10

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
FDB2552-F085	NA	FDB075N15A-F085
FDB3632-F085	NA	FDB075N15A-F085
HUFA76645S3ST-F085	NA	FDB075N15A-F085
FDB3652-F085	NA	FDB075N15A-F085
FDB2532-F085	NA	FDB075N15A-F085
FDB14AN06LA0-F085	NA	FDB075N15A-F085
FDB070AN06A0-F085	NA	FDB075N15A-F085