

Final Product/Process Change Notification

Document # : FPCN22774X Issue Date: 12 July 2019

Title of Change:	Transfer Cebu D2PAK Jedec & TO220 Jedec to ON Semiconductor Suzhou, China.		
Proposed first ship date:	19 October 2019		
Contact information:	Contact your local ON Semiconductor Sales Office or < <u>Jinman.Song@onsemi.com</u> >		
Samples:	Contact your local ON Semiconductor Sales Office or <pcn.samples@onsemi.com> Sample requests are to be submitted no later than 30 days from the date of first notification, Initial PCN or Final PCN, for this change. Samples delivery timing will be subject to request date, sample quantity and special customer packing/label requirements.</pcn.samples@onsemi.com>		
Additional Reliability Data:	Contact your local ON Semiconductor Sales Office or < <u>Lake.Wang@onsemi.com</u> >.		
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:	Customer may receive the parts from Suzhou site from month of October 2019 onwards once FPCN expire. Parts from ON Semiconductor Suzhou, China can be identified through product marking which follow ON Semiconductor marking format.		
Change Category:	☐ Wafer Fab Change	Test Change Other	
Change Sub-Category(s): Manufacturing Site Additio Manufacturing Site Transfer Manufacturing Process Char	Product specific change	☐ Datasheet/Product Doc change ☐ Shipping/Packaging/Marking ☐ Other:	
Sites Affected:	ON Semiconductor Sites: ON Cebu, Philippines ON Suzhou, China	External Foundry/Subcon Sites: None	

Description and Purpose:

ON Semiconductor (ON Suzhou) is transferring Cebu D2PAK Jedec & TO220 Jedec to Suzhou site in order to improve the capacity flexibility, changes includes site change, BOM change, process flow change, equipment change, but no changes on the POD.

It is ON Semiconductor's policy to utilize and follow the established standards in the industry to ensure our products conform to these standards for the purpose of supply chain interchangeability.

	Before Change Description	After Change Description
Lead Frame	D2PAK:TO263-JSS,TO220JSS (dimple)	D2PAK:TO263 IDF, TO220JSS
Mold Compound	MP195 EME6600CS KTMC5900GM CEL8240HF10	KTMC5900GM
Package Substrate	ON Cebu, Philippines	ON Suzhou, China
Assembly Site	ON Cebu, Philippines	ON Suzhou, China
Process flow(Plasma cleaning + AP coating)	For some device using CEL8240HF10	All devices

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

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Reliability Data Summary:

QV DEVICE NAME: FDB075N15A-F085 RMS : Q20160534 PACKAGE : D2PAK

Test	Specification	Condition	Interval	Result
HTRB	JESD22-A108	Tj = 150C, Bias = 100% of rated BV	1000hr	0/234
HTGB	JESD22-A108	Tj = 150C, Bias = 100% of rated Vgs	1000hr	0/234
PC	J STD 020 , JESD22-A113	MSL1, Reflow peak temp at 245C		0/234
TC + PC	JESD22-A104	Temp = -55°C to +150°C, t(dwell>15 min)	1000cyc	0/234
TCDT	JESD22 A104; Q101 appendix 6 J STD 035	100% C-SAM inspection after TC, followed 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	0/234
UHAST+ PC	JESD22-A118	85%RH, 110C	264hr	0/234
IOL	MIL-STD-750 Method 1037	Ta=25C DeltaTj=100C°, t(on)=t(off)= 3.5 min,	8572cyc	0/234
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

QV DEVICE NAME: HUF76633P3-F085

RMS : Q20160582 PACKAGE: TO220

Test	Specification	Condition	Interval	Result
HTRB	JESD22-A108	Tj = 150C, Bias = 100% of rated BV	1000hr	0/234
HTGB	JESD22-A108	Tj = 150C, Bias = 100% of rated Vgs	1000hr	0/234
TC	JESD22-A104	Temp = -55°C to +150°C, t(dwell>15 min)	1000cyc	0/234
TCDT	JESD22 A104; Q101 appendix 6 J STD 035	100% C-SAM inspection after TC, followed by decap, inspection or wire pull on all wires from 5 parts for 5 highest delaminated parts.		0/66
HAST	JESD22-A110	85%RH, 110C, 42V	264hr	0/234
UHAST	JESD22-A118	85%RH, 110C	264hr	0/234
IOL	MIL-STD-750 Method 1037	Ta=25C DeltaTj=100C $^{\circ}$, t(on)=t(off)= 3.5 min,	8572cyc	0/234
DPA	AEC Q101-004 Section 4	Post H3TRB or HAST and TC		0/6
PD	JESD22 B100	Verify physical dimensions to specifications		0/30
TS	MIL-STD-750 Method 2036	Evaluate lead integrity on leaded parts only		0/30
RSH	JESD22-B106	Ta=265C 10 sec dwell		0/30
SD	JSTD002	Ta=245C 10 sec dwell		0/10

Electrical Characteristic Summary:

Electrical characteristics are not impacted.

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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
NTBS2D7N06M7	
FDB8441	FDB075N15A-F085
FDB5800	
FDB8443	
FDB8445	
FDP8441	
NDB5060L	HUF76633P3-F085
NDB6060L	

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Appendix A: Changed Products

D

Product	Customer Part Number	Qualification Vehicle
FDB5800		FDB075N15A-F085
FDB8441		FDB075N15A-F085
FDB8443		FDB075N15A-F085
FDB8445		FDB075N15A-F085
FDP8441		FDB075N15A-F085
NDB5060L		HUF76633P3-F085
NDB6060L	NDB6060LTR-ND	HUF76633P3-F085
NTBS2D7N06M7		FDB075N15A-F085