ON Semiconductor®

Final Product/Process Change Notification

Document # : FPCN22436X
Issue Date: 10 October 2018

Title of Change:	FS3 IGBT 650V FAB Site transfer from BK 8inch (Korea) to AFSM 8inch (Japan).
Proposed first ship date:	17 January 2019
Contact information:	Contact your local ON Semiconductor Sales Office or <Sungdae.Shin@onsemi.com>
Samples:	Contact your local ON Semiconductor Sales Office or <Sungdae.Shin@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.
Additional Reliability Data:	Contact your local ON Semiconductor Sales Office or <Byeongyeop.Lee@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:	Affected parts will be identified with a date code of WW47'18.
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 Bucheon, Korea	External Foundry/Subcon Sites: Aizu Fujitsu, Japan

Description and Purpose:

This is a final change notification (FPCN) to customers announcing the qualification of additional wafer fabrication facility for FS3 TIGBT technology in Aizu Fujitsu Semiconductor Manufacturing (AFSM) located in Aizu, Japan. Upon the expiration of this notification, all products listed here will can be dual sourced from its current wafer fab facility in ON Semiconductor wafer fab in Bucheon, Korea and AFSM, Japan.

	Before Change Description	After Change Description
Wafer Fab Site	Bucheon, Korea	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.

Reliability Data Summary:

QV DEVICE NAME : FNB35060T
RMS: K49672
PACKAGE: SPMRA027

Test	Specification	Condition	Interval	Result
HTRB	JESD22-A108	Tj = 150°C, VCE = 0.8*Vces, Vcc 20V Vin = 0V	1,008 hrs	0/11
TC	JESD22-A104	Ta= -40°C to +125°C	1,000 cyc	0/11
HAST	JESD22-A110	T = 130°C, RH = 85%, time = 96 hours, VCE = 0.8*Vces, Vcc 20V Vin = 0V	96 hrs	0/11
UHAST	JESD22-A110	T = 130°C, RH = 85%	96 hrs	0/11
HTSL	JESD22-A108	Ta = 150°C	1,008 hrs	0/11
BPS	MIL- STD883 Method 2011	Per ass'y spec		Pass
BS	AEC-Q101-003	Per ass'y spec		Pass
DSS	MIL-STD883 Method 2019	Per ass'y spec		Pass
ESD	JS001 IEC61000-4	Human Body Model (HBM), Charge Device (CDM), Machine (MM)	HBM 3.0kV CDM 0.8kV MM 0.3kV	Pass

QV DEVICE NAME : FNA51560TD3
RMS: K49672
PACKAGE: SPMFAB20

Test	Specification	Condition	Interval	Result
HTRB	JESD22-A108	Tj = 150°C, VCE = 0.8*Vces, Vcc 20V Vin = 0V	1,008 hrs	0/11
TC	JESD22-A104	Ta= -40°C to +125°C	1,000 cyc	0/11
HAST	JESD22-A110	T = 130°C, RH = 85%, time = 96 hours, VCE = 0.8*Vces, Vcc 20V Vin = 0V	96 hrs	0/11
UHAST	JESD22-A110	T = 130°C, RH = 85%	96 hrs	0/11
HTSL	JESD22-A108	Ta = 150°C	1,008 hrs	0/11
BPS	MIL- STD883 Method 2011	Per ass'y spec		Pass
BS	AEC-Q101-003	Per ass'y spec		Pass
DSS	MIL-STD883 Method 2019	Per ass'y spec		Pass
ESD	JS001 IEC61000-4	Human Body Model (HBM), Charge Device (CDM), Machine (MM)	HBM 3.0kV CDM 0.6kV MM 0.3kV	Pass

QV DEVICE NAME : FNB81060T3
RMS: K49672
PACKAGE: SPMFAA25

Test	Specification	Condition	Interval	Result
HTRB	JESD22-A108	Tj = 150°C, VCE = 0.8*Vces, Vcc 20V Vin = 0V	1,008 hrs	0/11
TC	JESD22-A104	Ta= -40°C to +125°C	1,000 cyc	0/11
HAST	JESD22-A110	T = 130°C, RH = 85%, time = 96 hours, VCE = 0.8*Vces, Vcc 20V Vin = 0V	96 hrs	0/11
UHAST	JESD22-A110	T = 130°C, RH = 85%	96 hrs	0/11
HTSL	JESD22-A108	Ta = 150°C	1,008 hrs	0/11
BPS	MIL- STD883 Method 2011	Per ass'y spec		Pass
BS	AEC-Q101-003	Per ass'y spec		Pass
DSS	MIL-STD883 Method 2019	Per ass'y spec		Pass
ESD	JS001 IEC61000-4	Human Body Model (HBM), Charge Device (CDM), Machine (MM)	HBM 2.5kV CDM 0.8kV MM 0.2kV	Pass

Electrical Characteristic Summary:

Electrical characteristics are not impacted

List of Affected Parts:

Part Number	Qualification Vehicle
FNB35060T	FNB35060T
FNA51560TD3	FNA51560TD3
FNB81060T3	FNB81060T3

Appendix A: Changed Products

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Product	Customer Part Number	Qualification Vehicle
FNA51560TD3		FNA51560TD3
FNB35060T		FNB35060T
FNB81060T3		FNB81060T3