ON Semiconductor

FINAL PRODUCT/PROCESS CHANGE NOTIFICATION # 16843

Generic Copy

04-May-2012

TITLE: Final Notification of the Transfer of HS60 HDPL Die Manufacturing from ON Semiconductor AIZU Fab to ON Semiconductor CZ4 (Tesla) Fab due to Aizu Fab closure.

PROPOSED FIRST SHIP DATE: 04-Aug-2012

AFFECTED CHANGE CATEGORY(S): ON Semiconductor wafer fab site

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:
Contact your local ON Semiconductor Sales Office or <Richard.White@onsemi.com>

SAMPLES: Contact your local ON Semiconductor Sales Office or <Richard.White@onsemi.com>

ADDITIONAL RELIABILITY DATA: Available
Contact your local ON Semiconductor Sales Office or Peter Turlo<peter.turlo@onsemi.com>

ELECTRICAL CHARACTERIZATION DATA:
Contact Product Engineering Marc Fillion<marc.fillion@onsemi.com>

NOTIFICATION TYPE:

Final Product/Process Change Notification (FPCN)

This is the final change notification being sent to customers. FPCN's are issued at least 90 days prior to implementation of the change.

ON Semiconductor will consider this change approved unless specific conditions of acceptance are provided in writing within 30 days of receipt of this notice. To do so, contact <quality@onsemi.com>.

DESCRIPTION AND PURPOSE:

This document depicts the transfer and qualification of the HS60 HDPL process from the ON Semiconductor AIZU facility (Japan) to the ON Semiconductor CZ4 facility (Tesla). The CZ4 Tesla site is certified according to ISO/TS16949 standards.

Devices were qualified to achieve same electrical and reliability performances as the AIZU wafer fab. A full electrical characterization over the temperature range was performed for each product to check the device functionality and electrical specifications. Qualification tests were designed to show that the reliability of transferred devices will continue to meet or exceed ON Semiconductor standards.

Part status – Part status for all parts being replaced will be Active, Not Recommended for New Design initially. Once bridge inventory on each part has been depleted to the point where backlog equals remaining inventory, parts status will change to No Orders Allowed. Once all backlog has shipped, parts status will change to Cancel Pending.

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RELIABILITY DATA SUMMARY (HS60):

Qualification Vehicles

Vehicle	Die Size	Package	MSL	Assy	Lots
SIMS5051ANDR2G	2.03mm X 2.86mm	SO-8 Pb-free	MSL3	OSPI	2
NCV8450ASTT3G	1.714mm X 3.223mm	SOT223 Pb-free	MSL1	SBN	1

Accelerated LifeTime Simulation Tests:

#	Test	Specification	Conditions	Lots	Samples	Results
5	HTRB	JESD22 A108	Ta= 150°C, Vdss=28V/45V, 1008 hrs	3	80	0 / 240
10-alt	HTOL	JESD22 A108	Ta=125°C for 1000 hrs	3	80	0 / 240
27	DI	AEC Q101		1	5	0 / 5

Package Assembly integrity Test s

#	Test	Specification	Conditions	Lots	Samples	Results
2	PC	JESD22 A113	for AC, TC, HAST, H3TRB	all	all	0 / all
3	EV	JESD22 B101		all	all	0 / all
6a	HTSL	JESD22 A103	Ta=150°C for 1000 hrs.	3	80	0 / 240
7	TC	JESD22 A104	-65°C to+150°C; for 1000 cycles.	3	80	0 / 240
8	AC	JESD22 A102	121°C/100% RH, 15 psi for 96 hrs	3	80	0 / 240
9-alt	HAST	JESD22 A110	130°C/85% RH, 18.8psi,35V,96 hrs	2	80	0 / 160
9	H3TRB	JESD22 A101	85°C/85% RH, 36V, 1008 hrs	1	80	0 / 80
12	DPA	AEC Q101-004-4	post HAST, TC, and H3TRB	3	2	Pass
13	PD	JESD22 B100		3	10	0 / 30
20	RSH	JESD22 B106		1	30	0 / 30
21	SD	JESD22 002	PbSn,>95% coverage	1	10	0 / 10
22	TR	JESD22 B106		1	10	0 / 10
23	WBS	Mil-Std-750		1	5	0 / 5
24	BS	AEC-Q101-003		1	5	0 / 5
25	DS	Mil-Std-750		1	5	0 / 5

Electrical Verification (all products)

Multi temperature characterization data is available for individual devices upon request

CHANGED PART IDENTIFICATION:

The CZ 4 part number will include an A per table below.

List of affected General Parts:

List of affected General Parts:	Replacement Parts:	Samples Available:
NCV8450STT3G	NCV8450ASTT3G	Available now