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**FINAL PRODUCT/PROCESS CHANGE NOTIFICATION # 16821**Generic Copy

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27-Mar-2012

**TITLE:** Final Notification of the Transfer of LS50 HDPL Die Manufacturing from ON Semiconductor AIZU Fab to ON Semiconductor CZ4 (Tesla) Fab due to Aizu Fab closure.

**PROPOSED FIRST SHIP DATE:** 01-July-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](mailto:Richard.White@onsemi.com)>

**SAMPLES:** Contact your local ON Semiconductor Sales Office. Availability of samples for CZ4 devices is noted below. Note: for parts released in 2 reel types (i.e. NCV8402ASTT1G and NCV8402ASTT3G), samples will be shown available for STT3G reel type only.

**ADDITIONAL RELIABILITY DATA:** Available

Contact your local ON Semiconductor Sales Office or Peter Turlo<[peter.turlo@onsemi.com](mailto:peter.turlo@onsemi.com)>

**ELECTRICAL CHARACTERIZATION DATA:**

Contact Product Engineering Marc Fillion<[marc.fillion@onsemi.com](mailto: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](mailto:quality@onsemi.com)>.

**DESCRIPTION AND PURPOSE:**

This document depicts the transfer and qualification of the LS50 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 (LS50):**

Qualification Vehicles NCV8401 (2 lots) / NCV8403 (1 lot) / NCV8450

**Accelerated LifeTime Simulation Tests:**

#	Test	Specification	Conditions	Lots	Samples	Results
5	HTRB	JESD22 A108	Ta= 150°C, Vdss=45V, 1008 hrs	3	80	0 / 240
10-alt	HTOL	JESD22 A108	Ta=125°C for 2000 hrs	2	80	0 / 160
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, PTC	all	all	0 / all
3	EV	JESD22 B101		all	all	0 / all
6a	HTSL	JESD22 A103	Ta=150°C for 2000 hrs.	2	80	0 / 160
7	TC	JESD22 A104	-65°C to+150°C; for 1000 cycles.	3	84	0 / 252
8	AC	JESD22 A102	121°C/100% RH, 15 psi for 96 hrs	3	84	0 / 252
9-alt	HAST	JESD22 A110	130°C/85% RH, 18.8psi,bias,96 hrs	3	84	0 / 252
10-alt	PTC	JESD22 A105	ΔTj=100C°. With PC	1	30	0 / 30
12	DPA	AEC Q101-004-4	post HAST, or AC, and TC	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



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### **CHANGED PART IDENTIFICATION:**

In the case of direct transfer of a device from AIZU to CZ4, the letter "A" will be added to the OPN to identify parts from the new wafer fab. (Ex: NCV8401DTRKG will be replaced by NCV8401ADTRKG).

Please note that a number of devices are not being transferred but are being replaced by new CZ4 devices rather than a direct transfer of original device. These will show a different part number from the AIZU part number. (Ex: NID5001NT4G will be replaced by NCV8401ADTRKG). For these devices the CZ4 part is a pin for pin compatible device to the original device.

### **List of affected General Parts:**

List of affected General Parts:	Replacement Parts:	Samples Available:
NCV8401DTRKG	NCV8401ADTRKG	Available now
NCV8402DDR2G	NCV8402ADDR2G	Available now
NCV8402STT1G	NCV8402ASTT1G	See NCV8402ASTT3G
NCV8402STT3G	NCV8402ASTT3G	Available now
NCV8403DTRKG	NCV8403ADTRKG	Available now
NCV8403STT1G	NCV8403ASTT1G	See NCV8403ASTT3G
NCV8403STT3G	NCV8403ASTT3G	June – 2012
NCV8405STT1G	NCV8405ASTT1G	See NCV8405ASTT3G
NCV8405STT3G	NCV8405ASTT3G	Available now
NCV8406DTRKG	NCV8406ADTRKG	Available now
NCV8406STT3G	NCV8406ASTT3G	Available now
NCV8440STT1G	NCV8440ASTT1G	See NCV8440ASTT3G
NCV8440STT3G	NCV8440ASTT3G	Available now
NIC5004TS1	NIC5004ATS1	July - 2012
NIC9N05TS1	NIC9N05ATS1	Available now
NID5001NT4G	NCV8401ADTRKG	Available now
NID5003NT4G	NCV8403ADTRKG	Available now
NID6002NT4G	NCV8406ADTRKG	Available now
NID9N05CLT4G	NID9N05ACLT4G	Available now
NIF5002NT1G	NCV8402ASTT1G	See NCV8402ASTT3G
NIF5002NT3G	NCV8402ASTT3G	Available now
NIF5003NT1G	NCV8403ASTT1G	See NCV8403ASTT3G
NIF5003NT3G	NCV8403ASTT3G	June – 2012
NIF62514T1G	NCV8405ASTT1G	See NCV8405ASTT3G
NIF62514T3G	NCV8405ASTT3G	Available now
NIF9N05CLT1G	NCV8440ASTT1G	See NCV8440ASTT3G
NIF9N05CLT3G	NCV8440ASTT3G	Available now
NIMD6001NR2G	NIMD6001ANR2G	June – 2012

**FINAL PRODUCT/PROCESS CHANGE NOTIFICATION # 16821****List of affected Customer Specific Parts:**

<b>List of affected Customer Special Parts:</b>	<b>Replacement Parts:</b>	<b>Samples Available:</b>
SCV8440CWP	SCV8440ACWP	Available now
NIC9N05CLF	NIC9N05ACLF	Available now