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**FINAL PRODUCT/PROCESS CHANGE NOTIFICATION**

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**17-JUN-2005**

**SUBJECT: ON Semiconductor Final Product/Process Change Notification #14131**

**TITLE: Transfer of Analog Bipolar Integrated Circuits Die  
Manufacturing from East Greenwich (USA) to Roznov (Czech Republic)**

**EFFECTIVE DATE: 17-Aug -2005**

**AFFECTED CHANGE CATEGORY(S): ON Semiconductor Fab Site**

**AFFECTED PRODUCT DIVISION(S): Analog Products**

**ADDITIONAL RELIABILITY DATA:** Available

Contact your local ON Semiconductor Sales Office or Bob Marquis <FC88FC@onsemi.com>

**SAMPLES:** Contact your local ON Semiconductor Sales Office or  
Patrick Rousset <TTT252@onsemi.com>

**FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:**

Contact your local ON Semiconductor Sales Office

**NOTIFICATION TYPE:**

Final Product/Process Change Notification (FPCN)

Final change notification sent to customers. FPCNs are issued at least 60 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 your local ON Semiconductor Sales Office.

**DESCRIPTION AND PURPOSE:**

This is a sixth Final PCN for Initial PCN#13298, in addition to the FPCN#13517 from July 2004, FPCN#13823 from November 2004, FPCN#13889 from January 2005, FPCN#13939 from March 2005. FPCN#14075 from May 2005. Subsequent FPCNs will be released as additional devices impacted by the shutdown are qualified.

This notice is to confirm the qualification and transfer of integrated circuits processed with the 50 Volt, 40Volt, 30Volt, 17 Volt and 14 Volt technologies from the ON Semiconductor East Greenwich facility in Rhode Island (USA) to the Tesla wafer fab located in Roznov, Czech Republic due to the shutdown of the EG facility as previously announced.


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The integrated circuits design, electrical specifications, and mask sets remain identical. A full electrical characterization over the operating temperature range has been performed for each product to check the device functionality and electrical specifications.

Qualification tests results show that the reliability of transferred devices will continue to meet or exceed ON Semiconductor standards. ON Semiconductor recommends that customers evaluate sample units in each associated application circuit to ensure there are no unexpected electrical incompatibilities.

**RELIABILITY DATA SUMMARY:**

Test	Conditions	Duration	Lots	Results
Early Life (ELFR)	Ta=+125 deg C, Bias	48hrs	13 lots	0/12800
High Temp. Operating Life (HTOL)	Ta=+125 deg C, Bias	1008hrs	46 lots	0/3617
Temp. Cycle (TC)*	-65 to +150 deg C	500 cycles	24 lots	0/1848
Autoclave (AC)*	+121 deg C/ 15psig/100%RH	96hrs	12 lots	0/924
Temp. Humidity bias (THB)*	+85 deg C/85%RH	1008hrs	9 lots	0/693
Power Temp Cycle (PTC)	-40 to +125 deg C	1000 cycles	1 lot	0/77
Wire Bond Pull Strength (BPS)*	After TC, 30 bonds /5 units	500 cycles	12 lots	0/60
Wire Bond Shear Strength (BS)	30 bonds/5 units	N/A	1 lot	0/5

\*Note: These tests may be performed with preconditioned parts depending upon the device type used.

In addition to the above tests, each qualification vehicle was subjected to the following tests in comparison to units manufactured at EG:

Test	Conditions	Duration	Lots	Results
ESD testing	Human Body Model	N/A	1 lot/device	Equivalent
	Machine Model	N/A	1 lot/device	Equivalent
Dynamic Latch Up	6 units per lot	N/A	1 lot/device	Equivalent

The temperature electrical characterization for each device showed no issue.

**ELECTRICAL CHARACTERISTIC SUMMARY:**

The temperature electrical characterization for each device showed no issue.  
Device parameters will continue to meet all datasheet specifications.  
Characterization data is available upon request.

**CHANGED PART IDENTIFICATION:**

There will be no changes to standard device markings. Normal assembly lots traceability codes will identify the wafer fab source. Products shipped after the expiration date of this notice may be sourced with die produced in the Roznov facility.



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**AFFECTED DEVICE LIST (WITHOUT SPECIALS)**

**PART**

CS5157HGD16  
CS5157HGD16G  
CS5157HGDR16  
CS5157HGDR16G  
CS8221YDFR8  
CS8221YDFR8G  
CS8221YDP3  
CS8221YDPR3  
NCV8503PW25  
NCV8503PW25G  
NCV8503PW25R2  
NCV8503PW25R2G  
NCV8503PW33  
NCV8503PW33G  
NCV8503PW33R2  
NCV8503PW33R2G  
NCV8503PW50  
NCV8503PW50G  
NCV8503PW50R2  
NCV8503PW50R2G  
NCV8504PW25  
NCV8504PW25R2  
NCV8504PW25R2G  
NCV8504PW33  
NCV8504PW33G  
NCV8504PW33R2  
NCV8504PW33R2G  
NCV8504PW50  
NCV8504PW50G  
NCV8504PW50R2  
NCV8504PW50R2G  
NCV8505D2T25  
NCV8505D2T25R4  
NCV8505D2T33  
NCV8505D2T33R4



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NCV8505D2T50  
NCV8505D2T50G  
NCV8505D2T50R4  
NCV8505D2T50R4G  
NCV8506D2T25  
NCV8506D2T25R4  
NCV8506D2T33  
NCV8506D2T33R4  
NCV8506D2T50  
NCV8506D2T50R4