



INITIAL PRODUCT/PROCESS CHANGE NOTIFICATION
Generic Copy

02-Dec-2008

SUBJECT: ON Semiconductor Initial Product/Process Change Notification #16178

TITLE: Initial Notification for Transfer of High Speed Logic Integrated Circuits Die Manufacturing from ON Semiconductor Piestany (Slovakia) to Tower Semiconductor Israel.

PROPOSED FIRST SHIP DATE: 02-Apr-2009

AFFECTED CHANGE CATEGORY: ON Semiconductor Fab Site

AFFECTED PRODUCT DIVISION: Standard Logic Products

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:

Contact your local ON Semiconductor Sales Office or Won Kang <Won.Kang@onsemi.com>

NOTIFICATION TYPE:

Initial Product/Process Change Notification (IPCN)

First change notification sent to customers. IPCNs are issued at least 120 days prior to implementation of the change. An IPCN is advance notification about an upcoming change and contains general information regarding the change details and devices affected. It also contains the preliminary reliability qualification plan.

The completed qualification and characterization data will be included in the Final Product/Process Change Notification (FPCN).

This IPCN notification will be followed by a Final Product/Process Change Notification (FPCN) at least 90 days prior to implementation of the change.

DESCRIPTION AND PURPOSE:

May 14, 2008 - ON Semiconductor (Nasdaq: ONNN), has announced plans to close its two wafer manufacturing facilities located in Piestany, Slovakia, and transfer the production lines to other facilities. The targeted close date is Q1 2009.

Description of the change:

The transfer and qualification of the High Speed Logic CMOS process and the associated integrated circuits from the ON Semiconductor Piestany facility (Slovakia) to Tower Semiconductor Ltd. Israel.

Tower Semiconductor Ltd. is certified according to the ISO/TS16949 standard. High Speed Logic product family is being transferred to Tower Semiconductor, and will achieve the same electrical and reliability performances as the Piestany wafer fab. The transfer includes a process change to the previously qualified 0.6u CMOS process.

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Assembly will also be converted at the same time from gold wire bond to copper wire bond with the exception of the PDIP, SOIEAJ, and QFN packages which still use gold wire bond. SOIC, SOIC-W and TSSOP will be converted to copper wire bond. The qualification plan includes the requirement to validate both the fab transfer and conversion to copper wire bond altogether.

The integrated circuits design and electrical specifications will remain identical. A full electrical characterization over the temperature range will be performed for each product to check the device functionality and electrical specifications.

Qualification tests are designed to 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.

The High Speed Logic process is expected to be qualified at Tower Semiconductor by the end of 1Q2009 and all the products by end of 3Q2009.

A final notification (FPCN) will be published in 2Q2009, at least 60 days prior to the actual conversion. It will contain the qualification results and effective planned production release dates at Tower Semiconductor. Samples will become gradually available from March 2009.

QUALIFICATION PLAN:

Qualification of each device type to be transferred is being performed to the following requirements:

Three temperature electrical characterization
ESD testing Human Body Model and Machine Model
Latch up testing
Reliability tests include:

Test	Conditions	Duration/Sample Size
Early Life (ELFR)	Ta=+125°C, Bias	48hrs/77
High Temp. Operating Life (HTOL)	Ta=+125°C, Bias	1008hrs/77
Temp. Cycle (TC)*	-65°C to +150°C	500 cycles/77
Autoclave (AC) *	+121°C /15psig/100%RH	96hrs/77
High Temperature Storage Life (HTSL)	+150°C	1008hrs/77
High Accelerated Stress Test* (HAST)	+130°C/85%RH Bias	96hrs/77
Wire Bond Pull Strength (BPS)	After TC, 30 bonds/5 units	
Wire Bond Shear Strength (BS)	30 bonds/5 units	

*Note: These tests may be performed with pre-conditioned parts depending upon the device type used.



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AFFECTED DEVICE LIST:

MC74HC00ADG
MC74HC00ADR2
MC74HC00ADR2G
MC74HC00ADTR2
MC74HC00ADTR2G
MC74HC00AF
MC74HC00AFEL
MC74HC00AFELG
MC74HC00AFG
MC74HC00AN
MC74HC00ANG
MC74HC02AD
MC74HC02ADG
MC74HC02ADR2
MC74HC02ADR2G
MC74HC02ADTR2
MC74HC02ADTR2G
MC74HC02AN
MC74HC02ANG
MC74HC03ADG
MC74HC03ADR2
MC74HC03ADR2G
MC74HC03ADTR2
MC74HC03ADTR2G
MC74HC03AFELG
MC74HC03ANG
MC74HC04AD
MC74HC04ADG
MC74HC04ADR2
MC74HC04ADR2G
MC74HC04ADTR2
MC74HC04ADTR2G
MC74HC04AF
MC74HC04AFEL
MC74HC04AFELG
MC74HC04AFG
MC74HC04AN
MC74HC04ANG
MC74HC08AD
MC74HC08ADG
MC74HC08ADR2
MC74HC08ADR2G
MC74HC08ADTR2
MC74HC08ADTR2G
MC74HC08AFEL
MC74HC08AFELG
MC74HC08AN
MC74HC08ANG
MC74HC125AD
MC74HC125ADG
MC74HC125ADR2
MC74HC125ADR2G
MC74HC125ADT
MC74HC125ADTG



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MC74HC125ADTR2
MC74HC125ADTR2G
MC74HC125AF
MC74HC125AFEL
MC74HC125AFELG
MC74HC125AFG
MC74HC125AN
MC74HC125ANG
MC74HC126ADG
MC74HC126ADR2
MC74HC126ADR2G
MC74HC126ADTR2
MC74HC126ADTR2G
MC74HC126AFELG
MC74HC126ANG
MC74HC132AD
MC74HC132ADG
MC74HC132ADR2
MC74HC132ADR2G
MC74HC132ADT
MC74HC132ADTG
MC74HC132ADTR2
MC74HC132ADTR2G
MC74HC132AFELG
MC74HC132AN
MC74HC132ANG
MC74HC138AD
MC74HC138ADG
MC74HC138ADR2
MC74HC138ADR2G
MC74HC138ADTR2
MC74HC138ADTR2G
MC74HC138AFG
MC74HC138AN
MC74HC138ANG
MC74HC139ADG
MC74HC139ADR2
MC74HC139ADR2G
MC74HC139ADTR2
MC74HC139ADTR2G
MC74HC139AFELG
MC74HC139AN
MC74HC139ANG
MC74HC14AD
MC74HC14ADG
MC74HC14ADR2
MC74HC14ADR2G
MC74HC14ADT
MC74HC14ADTG
MC74HC14ADTR2
MC74HC14ADTR2G
MC74HC14AF
MC74HC14AFEL
MC74HC14AFELG
MC74HC14AFG
MC74HC14AN



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MC74HC14ANG
MC74HC157ADG
MC74HC157ADR2
MC74HC157ADR2G
MC74HC157ADTR2
MC74HC157ADTR2G
MC74HC157AFELG
MC74HC157AN
MC74HC157ANG
MC74HC164ADG
MC74HC164ADR2
MC74HC164ADR2G
MC74HC164ADTR2
MC74HC164ADTR2G
MC74HC164AN
MC74HC164ANG
MC74HC165AD
MC74HC165ADG
MC74HC165ADR2
MC74HC165ADR2G
MC74HC165ADTR2
MC74HC165ADTR2G
MC74HC165AF
MC74HC165AFEL
MC74HC165AFELG
MC74HC165AFG
MC74HC165AN
MC74HC165ANG
MC74HC174ADG
MC74HC174ADR2
MC74HC174ADR2G
MC74HC174ADTR2
MC74HC174ADTR2G
MC74HC174AFELG
MC74HC174ANG
MC74HC175ADG
MC74HC175ADR2
MC74HC175ADR2G
MC74HC175ADTR2
MC74HC175ADTR2G
MC74HC175AFELG
MC74HC175ANG
MC74HC240ADTR2
MC74HC240ADTR2G
MC74HC240ADWG
MC74HC240ADWR2
MC74HC240ADWR2G
MC74HC240AF
MC74HC240AFELG
MC74HC240AFG
MC74HC240AN
MC74HC240ANG
MC74HC244ADTG
MC74HC244ADTR2
MC74HC244ADTR2G
MC74HC244ADW



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- MC74HC244ADWG
- MC74HC244ADWR2
- MC74HC244ADWR2G
- MC74HC244AF
- MC74HC244AFEL
- MC74HC244AFELG
- MC74HC244AFG
- MC74HC244AN
- MC74HC244ANG
- MC74HC245ADT
- MC74HC245ADTG
- MC74HC245ADTR2
- MC74HC245ADTR2G
- MC74HC245ADW
- MC74HC245ADWG
- MC74HC245ADWR2
- MC74HC245ADWR2G
- MC74HC245AFELG
- MC74HC245AFG
- MC74HC245AN
- MC74HC245ANG
- MC74HC273ADT
- MC74HC273ADTG
- MC74HC273ADTR2
- MC74HC273ADTR2G
- MC74HC273ADW
- MC74HC273ADWG
- MC74HC273ADWR2
- MC74HC273ADWR2G
- MC74HC273AF
- MC74HC273AFEL
- MC74HC273AFELG
- MC74HC273AFG
- MC74HC273AN
- MC74HC273ANG
- MC74HC32AD
- MC74HC32ADG
- MC74HC32ADR2
- MC74HC32ADR2G
- MC74HC32ADTR2
- MC74HC32ADTR2G
- MC74HC32AFEL
- MC74HC32AFELG
- MC74HC32AN
- MC74HC32ANG
- MC74HC373ADT
- MC74HC373ADTG
- MC74HC373ADTR2
- MC74HC373ADTR2G
- MC74HC373ADW
- MC74HC373ADWG
- MC74HC373ADWR2
- MC74HC373ADWR2G
- MC74HC373AFELG
- MC74HC373AFG
- MC74HC373AN



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MC74HC373ANG
MC74HC374ADT
MC74HC374ADTG
MC74HC374ADTR2
MC74HC374ADTR2G
MC74HC374ADW
MC74HC374ADWG
MC74HC374ADWR2
MC74HC374ADWR2G
MC74HC374AFG
MC74HC374AN
MC74HC374ANG
MC74HC390ADG
MC74HC390ADR2
MC74HC390ADR2G
MC74HC390ADTR2
MC74HC390ADTR2G
MC74HC390AFELG
MC74HC390AFG
MC74HC390ANG
MC74HC393ADG
MC74HC393ADR2
MC74HC393ADR2G
MC74HC393ADTR2
MC74HC393ADTR2G
MC74HC393AFEL
MC74HC393AFELG
MC74HC393ANG
MC74HC4020ADG
MC74HC4020ADR2
MC74HC4020ADR2G
MC74HC4020ADTR2
MC74HC4020ADTR2G
MC74HC4020AFELG
MC74HC4020AFG
MC74HC4020AN
MC74HC4020ANG
MC74HC4040AD
MC74HC4040ADG
MC74HC4040ADR2
MC74HC4040ADR2G
MC74HC4040ADTR2
MC74HC4040ADTR2G
MC74HC4040AFELG
MC74HC4040AFG
MC74HC4040AN
MC74HC4040ANG
MC74HC4046AD
MC74HC4046ADG
MC74HC4046ADR2
MC74HC4046ADR2G
MC74HC4046ADT
MC74HC4046ADTG
MC74HC4046ADTR2
MC74HC4046ADTR2G
MC74HC4046AF



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MC74HC4046AFEL
MC74HC4046AFELG
MC74HC4046AFG
MC74HC4046AN
MC74HC4046ANG
MC74HC4051ADG
MC74HC4051ADR2
MC74HC4051ADR2G
MC74HC4051ADT
MC74HC4051ADTG
MC74HC4051ADTR2
MC74HC4051ADTR2G
MC74HC4051ADW
MC74HC4051ADWG
MC74HC4051ADWR2
MC74HC4051ADWR2G
MC74HC4051AFEL
MC74HC4051AFELG
MC74HC4051AN
MC74HC4051ANG
MC74HC4052ADG
MC74HC4052ADR2
MC74HC4052ADR2G
MC74HC4052ADT
MC74HC4052ADTG
MC74HC4052ADTR2
MC74HC4052ADTR2G
MC74HC4052ADWG
MC74HC4052ADWR2
MC74HC4052ADWR2G
MC74HC4052AFG
MC74HC4052AN
MC74HC4052ANG
MC74HC4053ADG
MC74HC4053ADR2
MC74HC4053ADR2G
MC74HC4053ADT
MC74HC4053ADTG
MC74HC4053ADTR2
MC74HC4053ADTR2G
MC74HC4053ADWG
MC74HC4053ADWR2
MC74HC4053ADWR2G
MC74HC4053AF
MC74HC4053AFEL
MC74HC4053AFELG
MC74HC4053AFG
MC74HC4053ANG
MC74HC4060ADG
MC74HC4060ADR2
MC74HC4060ADR2G
MC74HC4060ADT
MC74HC4060ADTG
MC74HC4060ADTR2
MC74HC4060ADTR2G
MC74HC4060AFELG



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MC74HC4060AN
MC74HC4060ANG
MC74HC4066AD
MC74HC4066ADG
MC74HC4066ADR2
MC74HC4066ADR2G
MC74HC4066ADR2H
MC74HC4066ADTR2
MC74HC4066ADTR2G
MC74HC4066AFEL
MC74HC4066AFELG
MC74HC4066ANG
MC74HC4316ADR2
MC74HC4316ADR2G
MC74HC4316AFELG
MC74HC4316ANG
MC74HC4538AD
MC74HC4538ADG
MC74HC4538ADR2
MC74HC4538ADR2G
MC74HC4538ADTR2
MC74HC4538ADTR2G
MC74HC4538AFEL
MC74HC4538AFELG
MC74HC4538AFG
MC74HC4538AN
MC74HC4538ANG
MC74HC4851AD
MC74HC4851ADG
MC74HC4851ADR2
MC74HC4851ADR2G
MC74HC4851ADTR2
MC74HC4851ADTR2G
MC74HC4851ADWR2
MC74HC4851ADWR2G
MC74HC4851ANG
MC74HC4852ADG
MC74HC4852ADR2
MC74HC4852ADR2G
MC74HC4852ADTR2
MC74HC4852ADTR2G
MC74HC4852ANG
MC74HC540ADTR2
MC74HC540ADTR2G
MC74HC540ADWG
MC74HC540ADWR2
MC74HC540ADWR2G
MC74HC540AFELG
MC74HC540AFG
MC74HC540ANG
MC74HC541ADT
MC74HC541ADTG
MC74HC541ADTR2
MC74HC541ADTR2G
MC74HC541ADW
MC74HC541ADWG



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MC74HC541ADWR2
MC74HC541ADWR2G
MC74HC541AF
MC74HC541AFEL
MC74HC541AFELG
MC74HC541AFG
MC74HC541AN
MC74HC541ANG
MC74HC573ADT
MC74HC573ADTG
MC74HC573ADTR2
MC74HC573ADTR2G
MC74HC573ADW
MC74HC573ADWG
MC74HC573ADWR2
MC74HC573ADWR2G
MC74HC573AFELG
MC74HC573AN
MC74HC573ANG
MC74HC574ADTR2
MC74HC574ADTR2G
MC74HC574ADW
MC74HC574ADWG
MC74HC574ADWR2
MC74HC574ADWR2G
MC74HC574AF
MC74HC574AFEL
MC74HC574AFELG
MC74HC574AFG
MC74HC574AN
MC74HC574ANG
MC74HC589AD
MC74HC589ADG
MC74HC589ADR2
MC74HC589ADR2G
MC74HC589ADTR2
MC74HC589ADTR2G
MC74HC589AFELG
MC74HC589AN
MC74HC589ANG
MC74HC595AD
MC74HC595ADG
MC74HC595ADH
MC74HC595ADR2
MC74HC595ADR2G
MC74HC595ADR2H
MC74HC595ADT
MC74HC595ADTG
MC74HC595ADTR2
MC74HC595ADTR2G
MC74HC595ADTR2H
MC74HC595AFEL
MC74HC595AFELG
MC74HC595AN
MC74HC595ANG
MC74HC74AD



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- MC74HC74ADG
- MC74HC74ADR2
- MC74HC74ADR2G
- MC74HC74ADTR2
- MC74HC74ADTR2G
- MC74HC74AF
- MC74HC74AFEL
- MC74HC74AFELG
- MC74HC74AFG
- MC74HC74AN
- MC74HC74ANG
- MC74HC86AD
- MC74HC86ADG
- MC74HC86ADR2
- MC74HC86ADR2G
- MC74HC86ADTR2
- MC74HC86ADTR2G
- MC74HC86AF
- MC74HC86AFEL
- MC74HC86AFELG
- MC74HC86AFG
- MC74HC86ANG
- MC74HCT04ADG
- MC74HCT04ADR2
- MC74HCT04ADR2G
- MC74HCT04ADTR2
- MC74HCT04ADTR2G
- MC74HCT04AFELG
- MC74HCT04ANG
- MC74HCT138ANG
- MC74HCT14ADG
- MC74HCT14ADR2
- MC74HCT14ADR2G
- MC74HCT14ADR2GH
- MC74HCT14ADTR2
- MC74HCT14ADTR2G
- MC74HCT14AFELG
- MC74HCT14ANG
- MC74HCT244ADTR2
- MC74HCT244ADTR2G
- MC74HCT244ADWG
- MC74HCT244ADWR2
- MC74HCT244ADWR2G
- MC74HCT244AFELG
- MC74HCT244AFG
- MC74HCT244AN
- MC74HCT244ANG
- MC74HCT245ADTG
- MC74HCT245ADTR2
- MC74HCT245ADTR2G
- MC74HCT245ADW
- MC74HCT245ADWG
- MC74HCT245ADWR2
- MC74HCT245ADWR2G
- MC74HCT245AFELG
- MC74HCT245AN



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MC74HCT245ANG
MC74HCT273ADTR2
MC74HCT273ADTR2G
MC74HCT273ADWG
MC74HCT273ADWR2G
MC74HCT273ANG
MC74HCT373ADTR2
MC74HCT373ADTR2G
MC74HCT373ADWG
MC74HCT373ADWR2
MC74HCT373ADWR2G
MC74HCT373AFEL
MC74HCT373AFELG
MC74HCT373ANG
MC74HCT374ADTR2
MC74HCT374ADTR2G
MC74HCT374ADTR2H
MC74HCT374ADWG
MC74HCT374ADWR2
MC74HCT374ADWR2G
MC74HCT374AFELG
MC74HCT374ANG
MC74HCT541ADTR2
MC74HCT541ADTR2G
MC74HCT541ADWG
MC74HCT541ADWR2
MC74HCT541ADWR2G
MC74HCT541AFEL
MC74HCT541AFELG
MC74HCT541AFG
MC74HCT541ANG
MC74HCT573ADTR2
MC74HCT573ADTR2G
MC74HCT573ADWG
MC74HCT573ADWR2
MC74HCT573ADWR2G
MC74HCT573AFEL
MC74HCT573AFELG
MC74HCT573ANG
MC74HCT574ADTR2
MC74HCT574ADTR2G
MC74HCT574ADWG
MC74HCT574ADWR2
MC74HCT574ADWR2G
MC74HCT574AN
MC74HCT574ANG
MC74HCT74ADG
MC74HCT74ADR2
MC74HCT74ADR2G
MC74HCT74ANG
MC74HCU04ADG
MC74HCU04ADR2
MC74HCU04ADR2G
MC74HCU04ADTR2
MC74HCU04ADTR2G
MC74HCU04AFEL



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MC74HCU04AFELG
MC74HCU04ANG
MC74VHC4051DR2
MC74VHC4051DR2G
MC74VHC4051DTR2
MC74VHC4051DTR2G
MC74VHC4051MG
MC74VHC4052DR2G
MC74VHC4052DTR2
MC74VHC4052DTR2G
MC74VHC4052MELG
MC74VHC4052MG
MC74VHC4053D
MC74VHC4053DR2G
MC74VHC4053DTR2
MC74VHC4053DTR2G
MC74VHC4053MG
MC74VHC4066DR2G
MC74VHC4066DTR2
MC74VHC4066DTR2G
MC74VHC4066MG
MC74VHC4316DG
MC74VHC4316DR2G
MC74VHC4316DT
MC74VHC4316DTG
MC74VHC4316DTR2
MC74VHC4316DTR2G
MC74VHC4316MG
NLSF1174MNR2G
NLV74HC244ADWR2
NLV74HC244ADWR2G
NLV74HC373ADWR2
NLV74HC4051ADWR2
NLV74HC4052ADWR2
NLV74HC4053ADWR2
NLV74HC4053ADWRG
NLV74HC4851ADWR2
NLV74HC541ADWR2
NLV74HC573ADWR2
NLV74HC574ADWR2
NLV74HCT541ADWG
NLV74HCT541ADWRG
NLV74HCT573ADWR2
NLV74HCT574ADWR2
NLV74HCT574ADWRG
NLVHC165ADR2
NLVHC165ADR2G
NLVHC4051ADWR2G
NLVHC4851ADR2G
NLVHC4851ADTR2G
SC300062D14ADR2
SC68254D595R2
SC74HC595ADTR2G
SL000HC273AF
SL000HC574ANG