ON Semiconductor

INITIAL PRODUCT/PROCESS CHANGE NOTIFICATION
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27-JAN-2004

SUBJECT: ON Semiconductor Initial Product/Process Change Notification #13298

TITLE: Initial Notification for Transfer of Analog Bipolar Integrated Circuits Die Manufacturing

EFFECTIVE DATE: 27-May-2004

AFFECTED CHANGE CATEGORY: ON Semiconductor Fab Site

AFFECTED PRODUCT DIVISION: Analog Products

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:
Contact Sales Representative or Patrick Rousset <TTT252@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 60 days prior to implementation of the change.

DESCRIPTION AND PURPOSE:
The purpose of this Initial PCN is to notify customers of ON Semiconductor's plan to qualify and transfer, production of the 17 Volt, 30 Volt, and 40 Volt Analog Bipolar integrated circuits from the ON Semiconductor East Greenwich facility in Rhode Island (USA) to the Tesla wafer fab located in Roznov, Czech Republic, over the next 12 months.

The 14 Volt and 50 Volt technologies have previously transferred from the ON Semiconductor East Greenwich facility in Rhode Island (USA)to the Tesla wafer fab located in Roznov, Czech Republic. (Refer to FPCN # 12511 and FPCN# 12512).

An additional IPCN may be issued at a later date for additional devices impacted by the closure of the East Greenwich facility. The integrated circuits design, electrical specifications, and mask sets will remain identical. A full electrical characterization over the temperature range will be performed for each product to ensure 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.

Initial Product/Process Change Notification #13298

Multiple final PCNs will be published, starting in the third quarter of 2004, providing the qualification results and effective planned production release dates at Tesla for specific devices.

QUALIFICATION PLAN:

Qualification of each device type to be transferred is being performed to the following requirements:
1) Three temperature electrical characterization (2 to 3 lots, 50 units each lot)
2) ESD testing (1 lot), Human Body Model and Machine Model
3) Latch up testing (1 lot)

Reliability testing will be performed on qualification vehicles chosen based on die size, complexity and run rates. The number of qualification vehicles being used to qualify each process is based upon the number of part types actually running on the process.

Analog integrated circuits processed with the 17 Volt technology
CS45008D14 3 Lots HTOL, ELFR, PC, THB
CS9002LFT48 3 Lots HTOL, PC, AC, TC
CS42046D8 3 Lots HTOL
CS42076D8 3 Lots HTOL

Analog integrated circuits processed with the 30 Volt technology
CS61012DW28 3 Lots HTOL, ELFR, PC, THB, AC, TC
CS51411D8 3 Lots HTOL, ELFR, PC, TC
CS8190N16 3 Lots HTOL
CS41115D8 3 Lots HTOL
CS44116T7 3 Lots HTOL

Analog integrated circuits processed with the 40 Volt technology

CS68059DW24 3 Lots HTOL, ELFR, PC, THB, AC, TC
CS68004DW16 3 Lots HTOL

Planned reliability tests are:

Test	Conditions	Duration
Early Life (ELFR)	Ta=+125DegC, Bias	48 hrs
High Temp.Operating Life (HTOL)	Ta=+125DegC, Bias	1008 hrs
Temp. Cycle (TC)*	-65DegC to +150DegC	500 cycles
Autoclave (AC) *	+121DegC /15psig/100%RH	96 hrs
Temp. Humidity bias (THB)*	+85DegC /85%RH	1008 hrs
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 preconditionned parts depending upon the device type used.

Initial Product/Process Change Notification #13298

AFFECTED DEVICE LIST (WITHOUT SPECIALS):

PART

CS1124YD8
CS1124YDR8
CS2841BEBN8
CS2841BED14
CS2841BEDR14
CS3341YD14
CS3341YDR14
CS3351YD14
CS3351YDR14
CS4121EDWF20
CS4121EDWFR20
CS4121ENF16
CS5112YDWF24
CS5112YDWFR24
CS51411ED8
CS51411EDR8
CS51411GD8
CS51411GDR8
CS51412ED8
CS51412EDR8
CS51412GD8
CS51412GDR8
CS51413ED8
CS51413EDR8
CS51413GD8
CS51413GDR8
CS51414ED8
CS51414EDR8
CS51414GD8
CS51414GDR8
CS5171ED8
CS5171EDR8
CS5171GD8
CS5171GDR8
CS5172ED8
CS5172EDR8
CS5172GD8
CS5172GDR8
CS5173ED8
CS5173EDR8
CS5173GD8
CS5173GDR8
CS5174ED8
CS5174EDR8
CS5174GD8
CS5174GDR8
CS8120YD14
CS8120YDP5
CS8120YDPR5
CS8120YDR14
CS8120YN8
CS8120YT5
CS8120YTHA5

Initial Product/Process Change Notification #13298

CS8120YTVA5
CS8122YT5
CS8122YTHA5
CS8122YTVA5
CS8126-1YDPS7
CS8126-1YDPSR7
CS8126-1YDPSR7G
CS8126-1YT5
CS8126-1YTHA5
CS8126-1YTHE5
CS8126-1YTHER5
CS8126-1YTVA5
CS8129YDW16
CS8129YDWR16
CS8129YT5
CS8129YTHA5
CS8129YTVA5
CS8156YT5
CS8156YTHA5
CS8156YTVA5
CS8182YDF8
CS8182YDFR8
CS8182YDPS5
CS8182YDPSR5
CS8183YDWF20
CS8183YDWFR20
CS8190EDWF20
CS8190EDWFR20
CS8190ENF16
CS8321YDP3
CS8321YDPR3
CS8321YT3
CS8371ET7
CS8371ETVA7
NCP5173MN
NCP5173MNR2
NCP5331FTR2
NCP5422ADR2
NCP5425DB
NCP5425DBR2