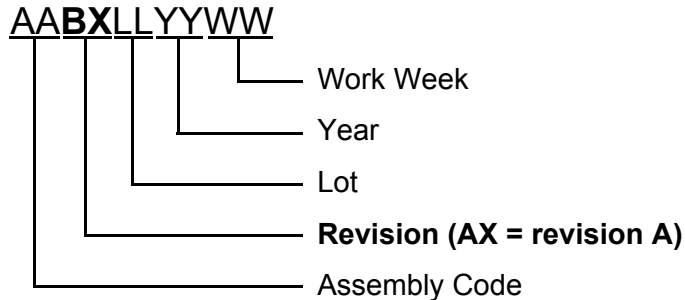# Errata: CS5461A - Silicon revision: B

Reference CS5461A Data Sheet revision DS661F1 dated AUG 2005.

Determining the Silicon Revision of the Integrated Circuit

On the front of the integrated circuit, directly under the part number, is an alpha-numeric line. For this device only, characters 3 and 4 in this line represent the silicon revision of the chip. For example, the following line indicates that the chip is a "B" revision device:

AA**BX**LLYYWW

- Work Week
- Year
- Lot
- **Revision (AX = revision A)**
- Assembly Code

The purpose of this errata is to demonstrate the differences between revision A and revision B of the device.

The data sheet referenced above is correct for the revision B devices.

Status Register

Description (revision A)

In revision A silicon, some of the lower status bits (e.g. *VSAG*) in the *Status* register do not latch (remain set until cleared) when an "alert" condition occurs.

Correction (revision B)

All bits in the *Status* register except *E1* and *E2* were made "sticky bits". Therefore when an "alert" condition occurs the status bit is set and can only be cleared if a one is written to the status bit or an instruction command is written to the device.

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Oscillator

Description (revision A)

In revision A silicon, the oscillator stops running in *Stand-by* (power-down) mode.

Correction (revision B)

When *Stand-by* mode is requested, the oscillator remains powered up. Also, critical registers (e.g. calibration registers) maintain their values after power-up.

Temperature Offest

Description (revision A)

In revision A silicon, default values in the *Temperature Gain* and *Temperature Offset* registers need to be adjusted after reset in order to achieve a zero-degree offset.

Correction (revision B)

Default values adjusted to:

Temperature Gain = 0x34E2E7
Temperature Offset = 0xF3E7D0
After reset, zero-degree offset is within ±5° C.

$\overline{E1}$ & $\overline{E2}$ Pulse Outputs

Description (revision A)

When using the $\overline{E1}$, $\overline{E2}$ pulse output in *Normal* format, with power factor less than one, pulses appear on pulse output $\overline{E2}$ (which is an indication of negative power). To determine the active energy pulse count use the equation:

Active Energy Pulse Count = $\overline{E1}$ – (2 × $\overline{E2}$)

Correction (revision B)

In *Normal* format the $\overline{E1}$ and $\overline{E2}$ pulse frequencies are calculated from the *Active Power* register. Therefore when:

1) Active energy is positive: *Active Energy Pulse Count* = pulse count on $\overline{E1}$

2) Active energy is negative: *Active Energy Pulse Count* = pulse count on $\overline{E2}$