Errata

- **Bandgap Reference Stabilizing Time**
- **Brown-Out Detection Level**

2. Bandgap Reference Stabilizing Time

The time for the internal voltage reference for the Analog Comparator to stabilize is longer than specified. The stabilizing period starts after the bandgap reference has been selected, and can go on for as much as 10 Seconds.

PROBLEM FIX/WORKAROUND

The Band-gap reference will be stable immediately if the internal brown-out detector is enabled.

1. Brown-Out Detection Level

The Brown-Out Detection level can increase when there is heavy I/O-activity on the device. The increase can be significant when some of the I/O pins are driving heavy loads.

PROBLEM FIX/WORKAROUND

Select a Vcc well above the Brown-out detection level.

Avoid loading I/O ports with high capacitive or resistive loads.

8-Bit AVR® Microcontroller with 2K/4K Bytes In-System Programmable Flash

AT90S/LS4433 Rev. A Errata Sheet