



# DS1501/DS1511 Y2KC Watchdog Real-Time Clock

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## REVISION A6 ERRATA

The errata listed below describe situations where DS1501/DS1511 revision A6 components perform differently than expected or differently than described in the data sheet. Dallas Semiconductor intends to correct these errata in subsequent die revisions. Revision A7 will not be produced.

This errata sheet only applies to DS1501/DS1511 revision A6 components. Revision A6 components are branded on the top side of the package with a six-digit code in the form yywwA6, where yy and ww are two-digit numbers representing the year and work-week of manufacture, respectively. To obtain an errata sheet on another DS1501/DS1511 die revision, visit our website at [www.maxim-ic.com/errata](http://www.maxim-ic.com/errata).

### 1. ALARMS RETRIGGER AFTER CLEAR

**Description:**

The alarm retriggers after clear. Under normal operation, after an alarm a service routine clears the interrupt. Writing to any register in the device causes the alarm to retrigger if done within the first second after the initial alarm.

**Work Around:**

The recommended work around is to delay clearing the alarm until all writes to the device are done. The alarm can then be cleared after a delay of at least 488 $\mu$ s after the last write.

### 2. WATCHDOG HAS A +5MS OFFSET BETWEEN PROGRAMMED AND ACTUAL TIMEOUT

**Description:**

The watchdog has a +5ms offset between the programmed and the actual timeout.

**Work Around:**

None.

### 3. TE MUST BE ACTIVE FOR AT LEAST 488 $\mu$ S TO ENSURE A TRANSFER

**Description:**

TE must be active for at least 488 $\mu$ s to ensure a transfer, but this is not indicated in the data sheet.

**Work Around:**

See No. 5. This requirement is expected to change on the new revision.

### 4. $\overline{RST}$ DOES NOT GO INACTIVE IF $V_{CC}$ GOES INACTIVE WHILE $\overline{RST}$ IS LOW FROM A WATCHDOG EVENT

**Description:**

If the watchdog is steered to the  $\overline{RST}$  output and  $V_{CC}$  goes inactive during a watchdog event,  $\overline{RST}$  never deactivates.

**Work Around:**

Do not steer the watchdog output to the  $\overline{RST}$  output.

**5. INCORRECT DATA IS SOMETIMES TRANSFERRED FROM THE INTERNAL REGISTERS TO THE BUFFERS****Description:**

Incorrect data is sometimes transferred from the internal time and date registers to the user registers when the TE bit is set to 0, or when any register is written before reading any time or date register.

**Work Around:**

To read the time and date correctly, the TE bit should not be used, and the following sequence should be performed:

- 1) Delay at least 488 $\mu$ s after the last write to the RTC.
- 2) Read the time and date registers sequentially twice, saving the data.
- 3) Compare each value from the first read with the second. If the data does not match, repeat steps 2 and 3.