Revision A2 may be identified by the date/revision brand yywwA2, where yy and ww are the year and work-week of manufacture, respectively. This errata sheet is valid only when used in conjunction with the most current version of the data sheet available from Dallas Semiconductor on our website at www.maxim-ic.com.

ERRATA

1. When any reset occurs during the execution of an extended MOVX data memory access, most instructions located at 0000h can fail to execute correctly. The exception is the LCALL instruction, mentioned below. In each case the failure causes the program to incorrectly execute the first several machine cycles of the affected instruction(s).

   Work Around: Use the instruction LCALL all location 0000h (the reset vector) to jump to the starting point of the main user code. This will use two bytes of the stack, which can be easily restored if necessary by resetting the stack pointer.

2. Timer 0 will only clock at the divide-by-4 rate if it is being used in mode 3 with the TMOD.2 bit set. Timer 0 can be configured correctly in both the divide-by-4 and divide-by-12 modes if the TMOD is cleared.

   Work Around: None. This erratum will be corrected in a future revision of the device.

3. When a short reset stimulus occurs during the execution of an extended MOVX data memory access, the ALE signal may not be driven with the strong transition drivers (V_{OH2} test levels) on the first instruction fetch following reset. This reduced drive current may not allow the ALE signal to rise to a logic high level before the first instruction fetch at location 0000h, possibly latching an incorrect address. This situation will only occur during a watchdog timer reset (the timer generates a momentary pulse to the internal reset circuitry) or when an external reset pulse of less than 2μs is asserted. This erratum does not affect a power-on reset as the internal crystal warmup period counter provides a reset pulse of greater than 2μs.

   Work Around: If the watchdog timer reset function is employed, use the watchdog timer interrupt to ensure that the device will not be executing MOVX instructions when the watchdog timer reset occurs. If an external reset stimulus is used, be sure that it is at least 2μs in duration.