



# PIC16C717/770/771

## PIC16C717/770/771 Rev. C Silicon Errata Sheet

The PIC16C717/770/771 parts you have received conform functionally to the Device Data Sheet (DS41120A), except for the anomalies described below.

### 1. PIC16C717/770/771 A/D Converter Characteristics

Exception to Table 15-12, Parameter A04.

PIC16C770/771 (12-bit A/D): No missing codes to 11-bits of resolution, up to 4 non-consecutive missing codes may occur when used to 12-bits of resolution.

#### Work around

None.

### 2. PIC16C717/770/771 Timer1 Module

When Timer1 is configured to operate as an asynchronous counter, care must be taken that there is no incoming pulse while the module is being turned off. If an incoming pulse arrives while Timer1 is being turned off (i.e., TMR1ON transitions from 1 to 0), the value of registers TMR1L and TMR1H will be unpredictable.

#### Work around

This solution involves changing Timer1 from Asynchronous to Synchronous mode before turning off Timer1. No additional resources are required for this solution.

Timer1 synchronization will start, effectively stopping Timer1, one Q period after the Synchronous mode is enabled, or one Q period later than would have been realized by simply clearing the TMR1ON bit. One additional count, in excess of the counts accrued during this extra Q period, may be accumulated before the TMR1ON bit is eventually cleared in the next instruction. The occurrence of this additional count is dependent on the phase relationship between OSC1, or the internal system clock, and T1CKI.

#### Code Example:

\*\*\*\*\*

```
; Call this routine to stop Timer1 asynchronous counting
;
; Timer1 is stopped after the timer is changed to synchronous mode
; The captured timer value resides in TMR1H and TMR1L at the completion of this
; routine.
```

```
TMR1Capture          ; entry point
    bcf    T1CON,NOT_T1SYNC    ; set for synchronous mode
    bcf    T1CON,TMR1ON        ; stop timer
    bsf    T1CON,NOT_T1SYNC    ; restore asynchronous mode
    return                    ; return to calling routine
```

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## Clarifications/Corrections to the Data Sheet:

In the Device Data Sheet (DS41120A), the following clarifications and corrections should be noted.

### 1. Table 15-12: Parameter A04

Was:

Param No.	Sym	Characteristic	Min	Typ	Max	Units	Conditions
A04	EDL	Differential Error	—	—	TBD	—	No missing codes to 10 bits . . .

Changed to:

Param No.	Sym	Characteristic	Min	Typ	Max	Units	Conditions
A04	EDL	Differential Error	—	—	+2 LSb -1 LSb	bits	No missing codes to 12 bits . . .

## REVISION HISTORY

Rev A Document (2/01)

Original errata document.

Issues 1 (A/D Converter) and 2 (Timer1 Module) were added (page 1).

Item 1, Table 5-12 concerning Parameter A04, was added (page 2).

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NOTES:

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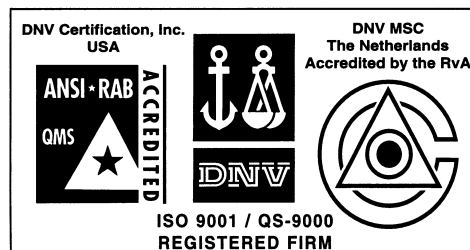
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