PIC16F87XA

PIC16F87XA Rev. B7 Silicon/Data Sheet Errata

The PIC16F87XA Rev. B7 parts you have received conform functionally to the Device Data Sheet (DS39582**B**), except for the anomalies described below.

All the issues listed here will be addressed in future revisions of the PIC16F87XA silicon.

The following silicon errata apply only to PIC16F87XA devices with these Device/Revision IDs:

Part Number	Device ID	Revision ID
PIC16F873A	00 1110 010	01000
PIC16F874A	00 1110 011	01000
PIC16F876A	00 1110 000	01000
PIC16F877A	00 1110 001	01000

1. Module: A/D (Operation)

The ADC is disabled when ADCON1<3:0> = `011x` (all inputs digital) and CMCON<2:0> = `111` (comparators are off). This is a special case that conflicts with the second sentence of Note 1 on page 131 of the device data sheet: “Pins configured as digital inputs will convert an analog input.”

Work around

For the ADC module to be enabled, it is necessary to either:

1. Enable the comparators (CMCON<2:0> ≠ `111`);

   or

2. Configure at least one ADC channel as an analog input (ADCON1<3:0> ≠ `011x`).

Clarifications/Corrections to the Data Sheet:

In the Device Data Sheet (DS39582**B**), the following clarifications and corrections should be noted.

1. Document Cover

In the printed version of the device data sheet, the cover lists the following as included devices:

- PIC16F873A
- PIC16F874A
- PIC18F876A
- PIC18F877A

In fact, this data sheet only describes PIC16F mid-range devices. The list should read (corrections in **bold**):

- PIC16F873A
- PIC16F874A
- PIC1**6**F876A
- PIC1**6**F877A

2. Module: Instruction Set

In compositing the data sheet for publication, one page of **Section 15.2 “Instruction Descriptions”** was omitted. The content of this page is identical to that of page 162 of the original version of the data sheet (DS39582**A**). The syntax of the 6 instructions on this page is included and correctly summarized in Table 15-2 (PIC16F87XA Instruction Set).

The content of the omitted page (without the header and footer of the original document) is reproduced on the following page. This should be regarded as an insert between the existing pages 163 and 164 of DS39582B.

MOVF	Move f
Syntax:	[*label*] MOVF f,d
Operands:	$0 \le f \le 127$ $d \in [0,1]$
Operation:	(f) → (destination)
Status Affected:	Z
Description:	The contents of register 'f' are moved to a destination dependant upon the status of 'd'. If d = 0, destination is W register. If d = 1, the destination is file register 'f' itself. d = 1 is useful to test a file register, since status flag Z is affected.

MOVLW	Move Literal to W
Syntax:	[*label*] MOVLW k
Operands:	$0 \le k \le 255$
Operation:	k → (W)
Status Affected:	None
Description:	The eight bit literal 'k' is loaded into W register. The don't cares will assemble as 0's.

MOVWF	Move W to f
Syntax:	[*label*] MOVWF f
Operands:	$0 \le f \le 127$
Operation:	(W) → (f)
Status Affected:	None
Description:	Move data from W register to register 'f'.

NOP	No Operation
Syntax:	[*label*] NOP
Operands:	None
Operation:	No operation
Status Affected:	None
Description:	No operation.

RETFIE	Return from Interrupt
Syntax:	[*label*] RETFIE
Operands:	None
Operation:	TOS → PC, 1 → GIE
Status Affected:	None

RETLW	Return with Literal in W
Syntax:	[*label*] RETLW k
Operands:	$0 \le k \le 255$
Operation:	k → (W); TOS → PC
Status Affected:	None
Description:	The W register is loaded with the eight bit literal 'k'. The program counter is loaded from the top of the stack (the return address). This is a two-cycle instruction.

3. Module: Product Identification System

In Example C of the Product Identification System, 10 MHz should read 20 MHz as shown in bold.

c) PIC16F877A-I/P = Industrial temp., PDIP package, **20 MHz**, normal V_{DD} limits.

REVISION HISTORY

Rev A Document (5/2006)

Original version of this document. Includes silicon issue 1 (A/D, Operation) and data sheet clarifications 1, 2 and 3 (Document Cover, Instruction Set and Product ID System).

NOTES:

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