PIC16(L)F72XA Family
Silicon Errata and Data Sheet Clarification

The PIC16(L)F72XA family devices that you have received conform functionally to the current Device Data Sheet (DS41417**A**), except for the anomalies described in this document.

The silicon issues discussed in the following pages are for silicon revisions with the Device and Revision IDs listed in Table 1. The silicon issues are summarized in Table 2.

The errata described in this document will be addressed in future revisions of the PIC16(L)F72XA silicon.

Note:	This document summarizes all silicon errata issues from all revisions of silicon, previous as well as current. Only the issues indicated in the last column of Table 2 apply to the current silicon revision (**A3**).

Data Sheet clarifications and corrections start on page 4, following the discussion of silicon issues.

The silicon revision level can be identified using the current version of MPLAB® IDE and Microchip's programmers, debuggers, and emulation tools, which are available at the Microchip corporate web site (www.microchip.com).

For example, to identify the silicon revision level using MPLAB IDE in conjunction with MPLAB ICD 2 or PICkit™ 3:

1. Using the appropriate interface, connect the device to the MPLAB ICD 2 programmer/ debugger or PICkit™ 3.
2. From the main menu in MPLAB IDE, select *Configure>Select Device*, and then select the target part number in the dialog box.
3. Select the MPLAB hardware tool (*Debugger>Select Tool*).
4. Perform a "Connect" operation to the device (*Debugger>Connect*). Depending on the development tool used, the part number *and* Device Revision ID value appear in the **Output** window.

Note:	If you are unable to extract the silicon revision level, please contact your local Microchip sales office for assistance.

The DEVREV values for the various PIC16(L)F72XA silicon revisions are shown in Table 1.

TABLE 1: SILICON DEVREV VALUES

Part Number	Device ID(1)	Revision ID for Silicon Revision(2)	
		A2	A3
PIC16F722A	01 1011 001x xxxx	0x2	0x3
PIC16LF722A	01 1011 011x xxxx	0x2	0x3
PIC16F723A	01 1011 000x xxxx	0x2	0x3
PIC16LF723A	01 1011 010x xxxx	0x2	0x3

Note 1: The Device ID is located at 2006h. The 5 Least Significant bits comprise the revision ID.

2: Refer to the *"PIC16F72X Memory Programming Specification"* (DS41332) for detailed information on Device and Revision IDs for your specific device.

TABLE 2: SILICON ISSUE SUMMARY

Module	Feature	Item Number	Issue Summary	Affected Revisions(1)	
				A2	A3
Oscillator	External HS Oscillator	1.1	Operation below 2.7V.	X	
Interrupts	Stack Push	2.	Interrupt logic incorrectly pushes two addresses to the stack.	X	X

Silicon Errata Issues

Note:	This document summarizes all silicon errata issues from all revisions of silicon, previous as well as current. Only the issues indicated by the shaded column in the following tables apply to the current silicon revision (as applicable).

1. Module: Oscillator

1.1 Operation below 2.7V

The minimum device V_{DD} when using the external crystal oscillator in HS mode is 3.0V.

Work around

Use the internal oscillator or an external clock source if operating below the 3.0V required for HS mode.

Affected Silicon Revisions

A2	A3						
X							

2. Module: Interrupts

The interrupt logic incorrectly pushes two addresses to the stack when vectoring to the interrupt vector. Specifically, the interrupt vector address 0x4 is incorrectly pushed to the stack after the current PC, at the time the interrupt was received, is pushed. This will cause the stack to overflow if the user program is operating seven calls deep when an interrupt arrives. Because the stack is circular, the overflow causes the first stack address to be overwritten.

Work around

Disable interrupts by clearing the GIE bit in the INTCON register whenever the user program is operating seven calls deep. This ensures that interrupts will not cause the stack to overflow.

Affected Silicon Revisions

A2	A3						
X	X						

Data Sheet Clarifications

None.

APPENDIX A: DOCUMENT REVISION HISTORY

Rev. A Document (07/2010)

Initial release of this document.

Rev. B Document (02/2011)

Updated errata to new format; Added Module 2, Interrupts.

NOTES:

Note the following details of the code protection feature on Microchip devices:

- Microchip products meet the specification contained in their particular Microchip Data Sheet.
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- Microchip is willing to work with the customer who is concerned about the integrity of their code.
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