

PIC16F753/HV753 Family Silicon Errata and Data Sheet Clarification

The PIC16F753/HV753 family devices that you have received conform functionally to the current Device Data Sheet (DS40001709B), 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 PIC16F753/HV753 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 (**B0**).

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 a hardware debugger:

1. Using the appropriate interface, connect the device to the hardware debugger.
2. Open an MPLAB IDE project.
3. Configure the MPLAB IDE project for the appropriate device and hardware debugger.
4. Based on the version of MPLAB IDE you are using, do one of the following:
 - a) For MPLAB IDE 8, select *Programmer > Reconnect*.
 - b) For MPLAB X IDE, select *Window > Dashboard* and click the **Refresh Debug Tool Status** icon ().
5. 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 PIC16F753/HV753 silicon revisions are shown in [Table 1](#).

TABLE 1: SILICON DEVREV VALUES

Part Number	Device ID	Revision ID (Silicon Revision)	
		A1	B0
PIC16F753	3030h	2001h	2040h
PIC16HV753	3031h	2001h	2040h

- Note 1:** The Revision ID and Device ID are located in the Configuration memory at addresses 8005h and 8006h, respectively.
- 2:** Refer to the “*PIC16F753/HV753 Flash Memory Programming Specification*” (DS41686) for detailed information on Device and Revision IDs for your specific device.

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TABLE 2: SILICON ISSUE SUMMARY

Module	Feature	Item Number	Issue Summary	Affected Revision ⁽¹⁾	
				A1	B0
Operational Amplifier (OPA)	Output Control	1.1	Op amp output control affected by TRIS setting.	X	X

Note 1: Only those issues indicated in the last column apply to the current silicon revision.

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 (**B0**).

1. Module: Operational Amplifier (OPA)

1.1 Op Amp Output Pin (OPAxOUT)

When the op amp module is enabled (OPAxEN = 1) and the associated I/O pin for OPAxOUT is configured as an output, the digital output control circuit overrides the op amp output control circuit and the output pin, OPAxOUT, will provide unexpected results.

Work around

Before enabling the op amp module, configure the OPAxOUT output pin as an input pin (TRIS = 1), instead of the customary output pin. The tri-state feature of the input pin control circuit will allow the op amp output to provide the expected results on the OPAxOUT pin.

Affected Silicon Revisions

A1	B0							
X	X							

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Data Sheet Clarifications

The following typographic corrections and clarifications are to be noted for the latest version of the device data sheet (DS40001709B):

<p>Note: Corrections are shown in bold. Where possible, the original bold text formatting has been removed for clarity.</p>

None.

APPENDIX A: DOCUMENT REVISION HISTORY

Rev A Document (07/2013)

Initial release of this document.

Rev B Document (07/2014)

Added Silicon Revision B0; Other minor corrections.

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

- Microchip products meet the specification contained in their particular Microchip Data Sheet.
- Microchip believes that its family of products is one of the most secure families of its kind on the market today, when used in the intended manner and under normal conditions.
- There are dishonest and possibly illegal methods used to breach the code protection feature. All of these methods, to our knowledge, require using the Microchip products in a manner outside the operating specifications contained in Microchip's Data Sheets. Most likely, the person doing so is engaged in theft of intellectual property.
- Microchip is willing to work with the customer who is concerned about the integrity of their code.
- Neither Microchip nor any other semiconductor manufacturer can guarantee the security of their code. Code protection does not mean that we are guaranteeing the product as “unbreakable.”

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