
PIC16F505 Rev. A Silicon/Data Sheet Errata

The PIC16F505 parts you have received conform functionally to the Device Data Sheet (DS41236B), except for the anomalies described below.

Microchip intends to address all issues listed here in future revisions of the **PIC16F505 silicon** or development tools software. Where noted, issues apply to listed revision only.

1. Module: MPLAB[®] IDE, Revision 6.61 and Earlier

MPLAB IDE 6.61 does not look for or set the Configuration Word in the hex file at the conventional logical location of 0xFFFF.

Work around:

The CONFIG data must be assigned in two locations within the assembly code to ensure proper Configuration Word placement in the hex file. This is only required for MPLAB IDE version 6.61 and earlier.

Fixed Code

```
org          0x07FF
data        _CP_OFF & _WDT_ON & etc.
__CONFIG   _CP_OFF & _WDT_ON & etc.
```

Re-locatable Code

```
.config     code 0x07FF
data        data _CP_OFF & _WDT_ON &
            etc.
__CONFIG   data _CP_OFF & _WDT_ON &
            etc.
```

2. Module: Invalid FSR Power-up Initialization on PIC16F505 ICD Devices

When using the ICD to debug software with the PIC16F505, bits 5 and 6 in the FSR register must be cleared to 0. The power-up defaults are 1's which causes the device to attempt to access bank 3. This bank is not available on the PIC16F505 devices so the results are invalid.

The power-up defaults are correct on the non-ICD version of the PIC16F505.

Work around:

Add the following two lines of code early in your initialization.

```
BCF  FSR, 5
BCF  FSR, 6
```

This will have no affect on a non-ICD device, but will correct the initialization errata on ICD devices.

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Clarifications/Corrections to the Data Sheet:

In the Device Data Sheet (DS41236B), the following clarifications and corrections should be noted.

1. Module: Electrical Characteristics

In Table 10-4, "Calibrated Internal RC Frequencies – PIC16F505" the "Min" and "Max" column should read as shown below.

TABLE 10-4: CALIBRATED INTERNAL RC FREQUENCIES – PIC16F505

AC CHARACTERISTICS			Standard Operating Conditions (unless otherwise specified)					
			Operating Temperature		-40°C ≤ TA ≤ +85°C (industrial)		-40°C ≤ TA ≤ +125°C (extended)	
			Operating Voltage VDD range is described in Section 10.1 "DC Characteristics"					
Param No.	Sym	Characteristic	Freq Tolerance	Min	Typ†	Max	Units	Conditions
F10	FOSC	Internal Calibrated INTOSC Frequency ⁽¹⁾	±1%	3.96	4.00	4.04	MHz	TA = 25°C, VDD = 3.5V
			±2%	3.92	4.00	4.08	MHz	2.5V ≤ VDD ≤ 5.5V 0°C ≤ TA ≤ +85°C
			±5%	3.80	4.00	4.20	MHz	2.0V ≤ VDD ≤ 5.5V -40°C ≤ TA ≤ +85°C (industrial) -40°C ≤ TA ≤ +125°C (extended)

Legend: TBD = To Be Determined.

* These parameters are characterized but not tested.

† Data in the Typical ("Typ") column is at 5V, 25°C unless otherwise stated. These parameters are for design guidance only and are not tested.

Note 1: To ensure these oscillator frequency tolerances, VDD and VSS must be capacitively decoupled as close to the device as possible. 0.1 μF and 0.01 μF values in parallel are recommended.

APPENDIX A: REVISION HISTORY

Rev A Document (9/2004)

First revision of this document.

Rev B Document (2/2006)

Added Module 1: "Electrical Characteristics" to the Clarifications/Corrections to the Data Sheet.

Rev C Document (5/2006)

Added Module 2: Invalid FSR Power-up Initialization on PIC16F505 ICD Devices.

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NOTES:

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