



**MICROCHIP**

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## PIC16C54A → PIC16C54C Migration

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### DEVICE MIGRATIONS

This document is intended to describe the functional differences and the electrical specification differences that are present when migrating from one device to the next.

**Note:** Even though compatible devices are specified to be tested to the same electrical specification, the characteristics of the devices may be different from each other (due to process difference). For systems that were designed to the device specifications, these process differences should not cause any issues in the application. For systems that did not tightly meet the electrical specifications, the process differences may cause the device to behave differently in the application.

Table 1 shows the considerations that must be taken into account when migrating from the PIC16C54A to the PIC16C54C.

**TABLE 1: PIC16C54A → PIC16C54C DIFFERENCES**

Functional Differences				
No.	Difference	H/W	S/W	Prog.
1	Master Clear Filter added, PIC16C54C. See Electrical Specification #30	✓	—	—
2	Code protection change, PIC16C54C now reads as 0 when code protect enabled	—	—	✓
3	Programming algorithm change, PIC16C54C uses a new programming algorithm	—	—	✓

Electrical Specification Differences										
Parm. No.	Sym.	Characteristic	PIC16C54A Data Sheet			PIC16C54C Data Sheet			Units	Conditions
			Min	Typ	Max	Min	Typ	Max		
	VDD	<b>Supply Voltage</b> XT, RC, and LP Options HS option	3.0 4.5	— —	6.25 5.5	3.0 4.5	— —	5.5 5.5	V V	
	IDD	<b>Supply Current</b> LP Option, Commercial LP Option, Industrial	— —	14 17	29 37	— —	14 17	32 40	μA μA	FOSC=32KHz VDD=3.0V WDT Disabled
	IPD	<b>Power Down Current</b> Industrial	— —	5.0 0.3	14 5.0	— —	4.0 0.25	14 5.0	μA μA	VDD=3.0 WDT Enabled WDT Disabled
	VIL	<b>Input Low Voltage</b> I/O Ports	VSS VSS	— —	0.8 0.2VDD	VSS VSS	— —	0.8 0.15VDD	V V	4.0V<VDD≤5.5V For all VDD 4.5V<VDD≤5.5V Otherwise
	VIH	<b>Input High Voltage</b> I/O Ports	2.0 0.2VDD+1V	— —	VDD VDD	2.0 0.25VDD+.8V	— —	VDD VDD	V V	4.0V<VDD≤5.5 For all VDD 4.5V<VDD≤5.5V Otherwise

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**NOTES:**



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