



PIC16C55 → PIC16C55A Migration

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: This device has been designed to perform to the parameters of its data sheet. It has been tested to an electrical specification designed to determine its conformance with these parameters. Due to process differences in the manufacture of this device, this device may have different performance characteristics than its earlier version. These differences may cause this device to perform differently in your application than the earlier version of this device.

Table 1 shows the considerations that must be taken into account when migrating from the PIC16C55 to the PIC16C55A.

TABLE 1: PIC16C55 → PIC16C55A DIFFERENCES

Functional Differences				
No.	Difference	H/W	S/W	Prog.
1	Master Clear Filter added, PIC16C55A. See Electrical Specification #30	✓	—	—
2	Programming algorithm change, PIC16C55A uses a new programming algorithm	—	—	✓
4	Oscillator configuration bits are user selectable on the PIC16C55A	—	✓	—

Electrical Specification Differences										
Parm. No.	Sym.	Characteristic	PIC16C55 Data Sheet			PIC16C55A Data Sheet			Units	Conditions
			Min	Typ	Max	Min	Typ	Max		
	V _{DD}	Supply Voltage XT, RC Options LP Option HS option XT, RC Opt. Extended LP Option Extended	3.0 2.5 4.5 3.25 2.5	— — — — —	6.25 6.25 5.5 6.0 6.0	3.0 2.5 4.5 3.0 3.0	— — — — —	5.5 5.5 5.5 5.5 5.5	V V V V V	Note 4 Note 4
	I _{DD}	Supply Current XT and RC options HS option LP Option, Commercial LP Option, Industrial	— — — —	1.8 4.8 15 15	3.3 10 32 40	— — — —	1.8 4.5 14 17	2.4 16 32 40	mA mA μA μA	Note 1 Note 2 Note 3 Note 3
	I _{PD}	Power Down Current Industrial Extended	— — — —	4.0 0.6 5.0 0.8	14 12.0 22 18	— — — —	4.0 0.25 4.5 0.3	14 5.0 22 18	μA μA μA μA	V _{DD} =3.0V WDT Enabled WDT Disabled WDT Enabled WDT Disabled
	V _{IL}	Input Low Voltage I/O Ports	V _{SS}	—	0.2 V _{DD}	V _{SS} V _{SS}	— —	0.8 0.15 V _{DD}	V V	4.0V < V _{DD} ≤ 5.5V For all V _{DD} 4.5V < V _{DD} ≤ 5.5V Otherwise
	V _{IH}	Input High Voltage I/O Ports	2.0 0.45V _{DD}	— —	V _{DD} V _{DD}	2.0 0.25 V _{DD} + .8V	— —	V _{DD} V _{DD}	V V	4.0V < V _{DD} ≤ 5.5 For all V _{DD} 4.5V < V _{DD} ≤ 5.5V Otherwise

- Note 1:** FOSC=4.0MHz, V_{DD}=5.5V
2: FOSC=20MHz, V_{DD}=5.5V
3: FOSC=32kHz, V_{DD}=3.0V, WDT disabled
4: The LP oscillator option is specified for the PIC16C55 up to 40kHz.

Note: The user should verify that the device oscillator starts and performs as expected. Adjusting the loading capacitor values and /or the oscillator mode may be required.

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- The PICmicro family meets the specifications contained in the Microchip Data Sheet.
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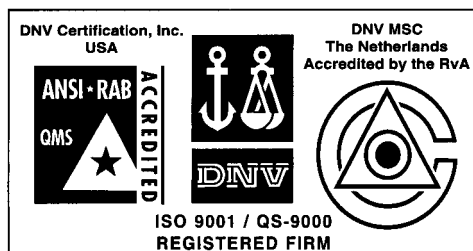
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