PIC16C62A → PIC16C62B 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.

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.

Table 1 shows the considerations that must be taken into account when migrating from the PIC16C62A to the PIC16C62B.

TABLE 1: PIC16C62A → PIC16C62B DIFFERENCES

Functional Differences due to Errata or Module Update					
No.	**Module**	**Difference**	**H/W**	**S/W**	**Prog.**
7	SSP	Supports all four SPI™ modes. (Now uses SSP vs BSSP module.) See SSP module in the PICmicro™ Mid-Range MCU Family Reference Manual, (DS33023).	—	✓	—
		Operating voltages and frequencies have been redefined.	✓	—	—

H/W - Issues may exist with regard to the application circuits.
S/W - Issues may exist with regard to the user program.
Prog. - Issues may exist when writing the program to the controller.

TABLE 2: ELECTRICAL SPECIFICATION DIFFERENCES

Param No.	Symbol	Characteristic		PIC16C62A			PIC16C62B			Unit
				Min	Typ†	Max	Min	Typ†	Max	
Core										
D001 D001A	VDD	Supply Voltage XT, LP, RC mode HS mode BOR enabled **(Note 1)**		4.0 4.5 —	— — —	6.0 6.0 —	4.0 **4.0** **VBOR**	— — —	**5.5** **5.5** **5.5**	V V V
D005	VBOR	Brown-out Reset Voltage		3.7	4.0	4.3	**3.65**	—	**4.35**	V
D022	ΔIWDT	Watchdog Module Differential Current		—	—	—	—	**6.0**	**20**	µA
D023/ **D022A**	ΔIBOR	Brown-out Detect Module Differential Current		— —	350 —	425 —	— —	— **TBD**	— **200**	µA µA
D150†	VOD	Open Drain High Voltage on RA4		—	—	14.0	—	—	**8.5**	V
SSP in SPI mode										
71	TscH	SCK input high time (Slave mode)	**Continuous**	TCY + 20	—	—	**1.25TCY + 30**	—	—	ns
71A			Single Byte				**40**	—	—	ns
72	TscL	SCK input low time (Slave mode)	**Continuous**	TCY + 20	—	—	**1.25TCY + 30**	—	—	ns
72A			Single Byte				**40**	—	—	ns
73	TdiV2scH, TdiV2scL	Setup time of SDI data input to SCK edge		50	—	—	**100**	—	—	ns
73A**(2)**	TB2B	Last clock edge of Byte1 to the 1st clock edge of Byte2		—	—	—	**1.5TCY + 40**	—	—	ns
74	TscH2diL, TscL2diL	Hold time of SDI data input to SCK edge		50	—	—	**100**	—	—	ns
75	TdoR	SDO data output rise time	PIC16CXX	—	10	25	—	10	25	ns
			PIC16LCXX				—	**20**	**45**	ns
78	TscR	SCK output rise time (Master mode)	PIC16CXX	—	10	25	—	10	25	ns
			PIC16LCXX				—	**20**	**45**	ns
80	TscH2doV, TscL2doV	SDO data output valid after SCK edge	PIC16CXX	—	—	50	—	—	50	ns
			PIC16LCXX				—	—	**100**	ns
82	**TssL2doV**	SDO data output valid after $\overline{SS}$ falling edge	PIC16CXX	—	—	—	—	—	**50**	ns
			PIC16LCXX				—	—	**100**	ns
83	TscH2ssH, TscL2ssH	$\overline{SS}$ ↑ after SCK edge		—	—	—	**1.5TCY + 40**	—	—	ns

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

Note 1: When BOR is enabled, the device will operate correctly above the VBOR voltage trip point.

2: Specification 73A is only required if specifications 71A and 72A are used.

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