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Details	
Product Status	Active
Core Processor	PIC
Core Size	8-Bit
Speed	20MHz
Connectivity	-
Peripherals	POR, WDT
Number of I/O	11
Program Memory Size	1.5KB (1K x 12)
Program Memory Type	FLASH
EEPROM Size	-
RAM Size	67 x 8
Voltage - Supply (Vcc/Vdd)	2V ~ 5.5V
Data Converters	A/D 3x8b
Oscillator Type	Internal
Operating Temperature	-40°C ~ 85°C (TA)
Mounting Type	Surface Mount
Package / Case	14-SOIC (0.154", 3.90mm Width)
Supplier Device Package	14-SOIC
Purchase URL	https://www.e-xfl.com/product-detail/microchip-technology/pic16f526t-i-sl

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QUALITY MANAGEMENT SYSTEM
CERTIFIED BY DNV
ISO/TS 16949:2002

NOTES:

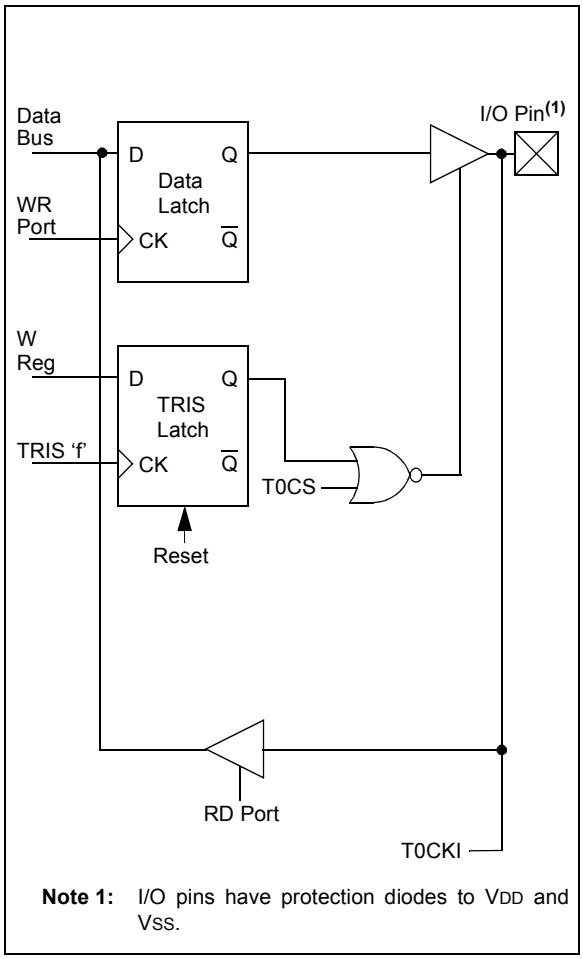
TABLE 4-1: SPECIAL FUNCTION REGISTER (SFR) SUMMARY

Addr	Name	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0	Value on Power-on Reset	Page #
N/A	TRIS	—	—	I/O Control Register (PORTB, PORTC)						--11 1111	27
N/A	OPTION	Contains control bits to configure Timer0 and Timer0/WDT prescaler								1111 1111	19
00h	INDF	Uses contents of FSR to Address Data Memory (not a physical register)								xxxx xxxx	22
01h/41h	TMR0	Timer0 Module Register								xxxx xxxx	37
02h(1)	PCL	Low order 8 bits of PC								1111 1111	21
03h	STATUS	RBWUF	CWUF	PA0	$\overline{TO}$	$\overline{PD}$	Z	DC	C	0001 1xxx	18
04h	FSR	Indirect Data Memory Address Pointer								100x xxxx	22
05h/45h	OSCCAL	CAL6	CAL5	CAL4	CAL3	CAL2	CAL1	CAL0	—	1111 111-	20
06h/46h	PORTB	—	—	RB5	RB4	RB3	RB2	RB1	RB0	--xx xxxx	27
07h	PORTC	—	—	RC5	RC4	RC3	RC2	RC1	RC0	--xx xxxx	28
08h	CM1CON0	C1OUT	$\overline{C1OUTEN}$	C1POL	$\overline{C1T0CS}$	C1ON	C1NREF	C1PREF	$\overline{C1WU}$	q111 1111	63
09h	ADCON0	ANS1	ANS0	ADCS1	ADCS0	CHS1	CHS0	GO/$\overline{DONE}$	ADON	1111 1100	61
0Ah	ADRES	ADC Conversion Result								xxxx xxxx	62
0Bh	CM2CON0	C2OUT	$\overline{C2OUTEN}$	C2POL	C2PREF2	C2ON	C2NREF	C2PREF1	$\overline{C2WU}$	q111 1111	64
0Ch	VRCON	VREN	VROE	VRR	—	VR3	VR2	VR1	VR0	001- 1111	69
21h/61h	EECON	—	—	—	FREE	WRERR	WREN	WR	RD	---0 x000	23
25h/65h	EEDATA	SELF READ/WRITE DATA								xxxx xxxx	23
26h/66h	EEADR	—	—	SELF READ/WRITE ADDRESS						--xx xxxx	23

Legend: x = unknown, u = unchanged, – = unimplemented, read as '0' (if applicable), q = value depends on condition.
Shaded cells = unimplemented or unused

Note 1: The upper byte of the Program Counter is not directly accessible. See **Section 4.6 "Program Counter"** for an explanation of how to access these bits.

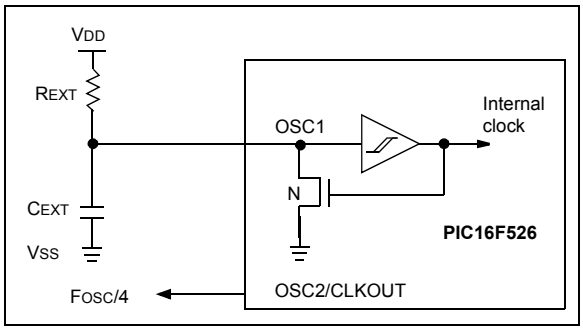
FIGURE 6-10: BLOCK DIAGRAM OF RC5



Note 1: I/O pins have protection diodes to V_{DD} and V_{SS}.

Also, see the Electrical Specifications section for variation of oscillator frequency due to VDD for given REXT/CEXT values, as well as frequency variation due to operating temperature for given R, C and VDD values.

FIGURE 8-5: EXTERNAL RC OSCILLATOR MODE



8.2.5 INTERNAL 4/8 MHz RC OSCILLATOR

The internal RC oscillator provides a fixed 4/8 MHz (nominal) system clock at VDD = 5V and 25°C, (see **Section 14.0 "Electrical Characteristics"** for information on variation over voltage and temperature).

In addition, a calibration instruction is programmed into the last address of memory, which contains the calibration value for the internal RC oscillator. This location is always non-code protected, regardless of the code-protect settings. This value is programmed as a `MOVLW XX` instruction where `XX` is the calibration value, and is placed at the Reset vector. This will load the W register with the calibration value upon Reset and the PC will then roll over to the users program at address 0x000. The user then has the option of writing the value to the OSCCAL Register (05h) or ignoring it.

OSCCAL, when written to with the calibration value, will "trim" the internal oscillator to remove process variation from the oscillator frequency.

Note:	Erasing the device will also erase the pre-programmed internal calibration value for the internal oscillator. The calibration value must be read prior to erasing the part so it can be reprogrammed correctly later.

For the PIC16F526 device, only bits 7:1 of OSCCAL are used for calibration. See Register 4-3 for more information.

Note:	The bit 0 of the OSCCAL register is unimplemented and should be written as '0' when modifying OSCCAL for compatibility with future devices.

8.9 Power-down Mode (Sleep)

A device may be powered down (Sleep) and later powered up (wake-up from Sleep).

8.9.1 SLEEP

The Power-Down mode is entered by executing a SLEEP instruction.

If enabled, the Watchdog Timer will be cleared but keeps running, the $\overline{TO}$ bit of the STATUS register is set, the $\overline{PD}$ bit of the STATUS register is cleared and the oscillator driver is turned off. The I/O ports maintain the status they had before the SLEEP instruction was executed (driving high, driving low or high-impedance).

Note:	A Reset generated by a WDT time-out does not drive the $\overline{MCLR}$ pin low.

For lowest current consumption while powered down, the T0CKI input should be at V_{DD} or V_{SS} and the RB3/$\overline{MCLR}$/V_{PP} pin must be at a logic high level if $\overline{MCLR}$ is enabled.

8.9.2 WAKE-UP FROM SLEEP

The device can wake-up from Sleep through one of the following events:

1. An external Reset input on RB3/$\overline{MCLR}$/V_{PP} pin, when configured as $\overline{MCLR}$.
2. A Watchdog Timer Time-out Reset (if WDT was enabled).
3. A change on input pin RB0, RB1, RB3 or RB4 when wake-up on change is enabled.
4. A change in one of the comparator output bits, C1OUT or C2OUT (if comparator wake-up is enabled).

These events cause a device Reset. The $\overline{TO}$, $\overline{PD}$ and CWUF/RBWUF bits can be used to determine the cause of device Reset. The $\overline{TO}$ bit is cleared if a WDT time-out occurred (and caused wake-up). The $\overline{PD}$ bit, which is set on power-up, is cleared when SLEEP is invoked. The CWUF bit indicates a change in a comparator output state while the device was in Sleep. The RBWUF bit indicates a change in state while in Sleep at pins RB0, RB1, RB3 or RB4 (since the last file or bit operation on RB port).

Note:	**Caution:** Right before entering Sleep, read the input pins. When in Sleep, wake-up occurs when the values at the pins change from the state they were in at the last reading. If a wake-up on change occurs and the pins are not read before re-entering Sleep, a wake-up will occur immediately even if no pins change while in Sleep mode.

The WDT is cleared when the device wakes from Sleep, regardless of the wake-up source.

Note:	**Caution:** Right before entering Sleep, read the comparator Configuration register(s) CM1CON0 and CM2CON0. When in Sleep, wake-up occurs when the comparator output bit C1OUT and C2OUT change from the state they were in at the last reading. If a wake-up on comparator change occurs and the pins are not read before re-entering Sleep, a wake-up will occur immediately, even if no pins change while in Sleep mode.

NOTES:

FIGURE 11-1: COMPARATOR VOLTAGE REFERENCE BLOCK DIAGRAM

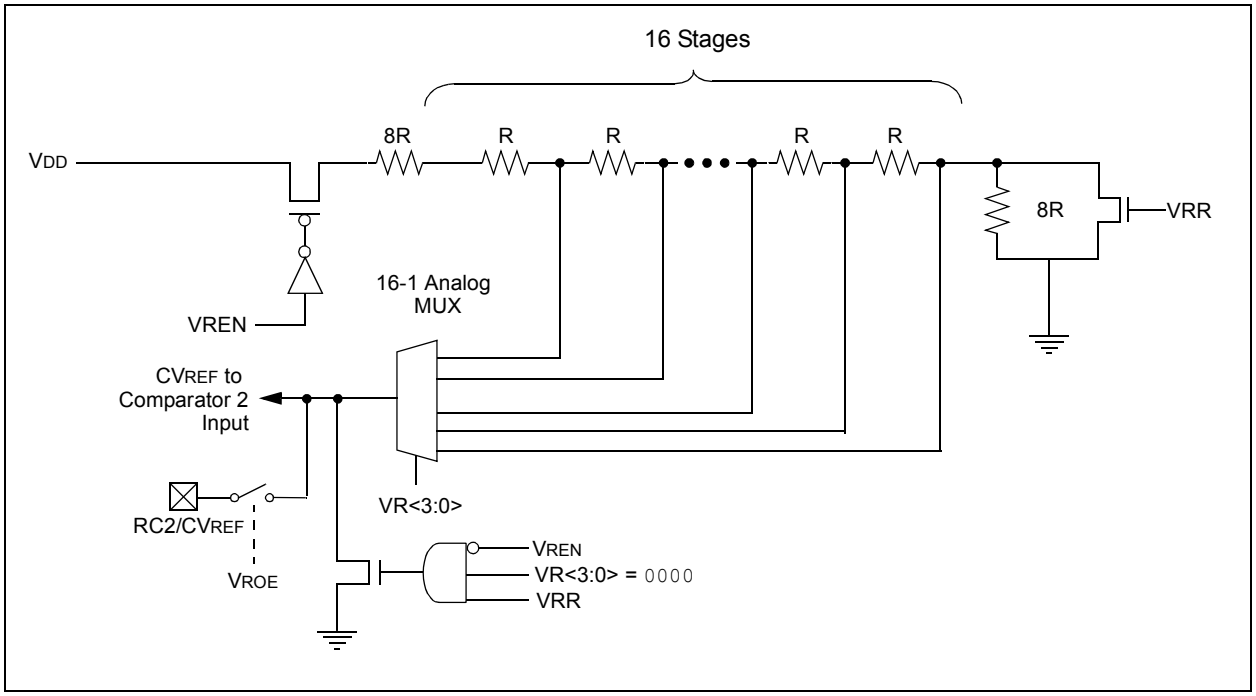


TABLE 11-1: REGISTERS ASSOCIATED WITH COMPARATOR VOLTAGE REFERENCE

Name	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0	Value on POR	Value on all other Resets
VRCON	VREN	VROE	VRR	—	VR3	VR2	VR1	VR0	001- 1111	uuu- uuuu
CM1CON0	C1OUT	$\overline{\text{C1OUTEN}}$	C1POL	$\overline{\text{C1T0CS}}$	C1ON	C1NREF	C1PREF	$\overline{\text{C1WU}}$	q111 1111	quuu uuuu
CM2CON0	C2OUT	$\overline{\text{C2OUTEN}}$	C2POL	C2PREF2	C2ON	C2NREF	C2PREF1	$\overline{\text{C2WU}}$	q111 1111	quuu uuuu

Legend: x = unknown, u = unchanged, – = unimplemented, read as '0', q = value depends on condition.

12.0 INSTRUCTION SET SUMMARY

The PIC16 instruction set is highly orthogonal and is comprised of three basic categories.

- **Byte-oriented** operations
- **Bit-oriented** operations
- **Literal and control** operations

Each PIC16 instruction is a 12-bit word divided into an **opcode**, which specifies the instruction type, and one or more **operands** which further specify the operation of the instruction. The formats for each of the categories is presented in Figure 12-1, while the various opcode fields are summarized in Table 12-1.

For **byte-oriented** instructions, 'f' represents a file register designator and 'd' represents a destination designator. The file register designator specifies which file register is to be used by the instruction.

The destination designator specifies where the result of the operation is to be placed. If 'd' is '0', the result is placed in the W register. If 'd' is '1', the result is placed in the file register specified in the instruction.

For **bit-oriented** instructions, 'b' represents a bit field designator which selects the number of the bit affected by the operation, while 'f' represents the number of the file in which the bit is located.

For **literal and control** operations, 'k' represents an 8 or 9-bit constant or literal value.

TABLE 12-1: OPCODE FIELD DESCRIPTIONS

Field	Description
f	Register file address (0x00 to 0x7F)
W	Working register (accumulator)
b	Bit address within an 8-bit file register
k	Literal field, constant data or label
x	Don't care location (= 0 or 1) The assembler will generate code with x = 0. It is the recommended form of use for compatibility with all Microchip software tools.
d	Destination select; d = 0 (store result in W) d = 1 (store result in file register 'f') Default is d = 1
label	Label name
TOS	Top-of-Stack
PC	Program Counter
WDT	Watchdog Timer counter
$\overline{TO}$	Time-out bit
$\overline{PD}$	Power-down bit
dest	Destination, either the W register or the specified register file location
[ ]	Options
( )	Contents
Æ	Assigned to
< >	Register bit field
Œ	In the set of
italics	User defined term (font is courier)

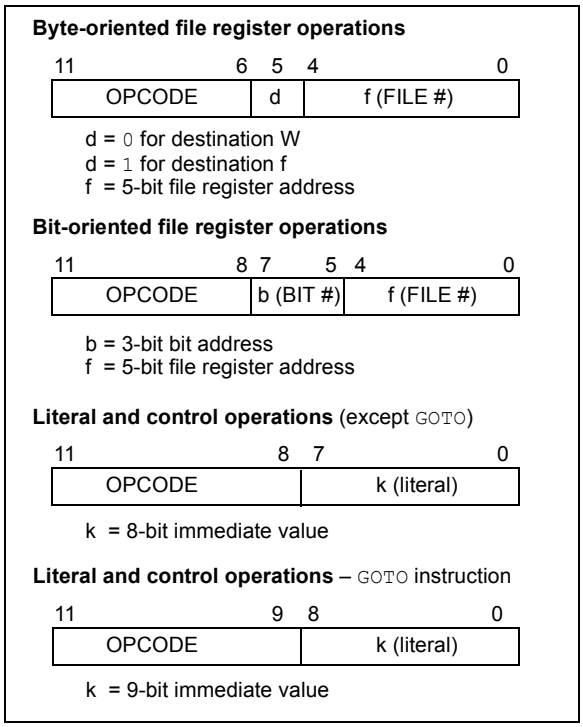
All instructions are executed within a single instruction cycle, unless a conditional test is true or the program counter is changed as a result of an instruction. In this case, the execution takes two instruction cycles. One instruction cycle consists of four oscillator periods. Thus, for an oscillator frequency of 4 MHz, the normal instruction execution time is 1 μs. If a conditional test is true or the program counter is changed as a result of an instruction, the instruction execution time is 2 μs.

Figure 12-1 shows the three general formats that the instructions can have. All examples in the figure use the following format to represent a hexadecimal number:

0xhhh

where 'h' signifies a hexadecimal digit.

FIGURE 12-1: GENERAL FORMAT FOR INSTRUCTIONS



ADDWF	Add W and f
Syntax:	[*label*] ADDWF f,d
Operands:	0 ≤ f ≤ 31 d ∈ [0,1]
Operation:	(W) + (f) → (dest)
Status Affected:	C, DC, Z
Description:	Add the contents of the W register and register 'f'. If 'd' is '0', the result is stored in the W register. If 'd' is '1', the result is stored back in register 'f'.

ANDLW	AND literal with W
Syntax:	[*label*] ANDLW k
Operands:	0 ≤ k ≤ 255
Operation:	(W).AND. (k) → (W)
Status Affected:	Z
Description:	The contents of the W register are AND'ed with the eight-bit literal 'k'. The result is placed in the W register.

ANDWF	AND W with f
Syntax:	[*label*] ANDWF f,d
Operands:	0 ≤ f ≤ 31 d ∈ [0,1]
Operation:	(W) .AND. (f) → (dest)
Status Affected:	Z
Description:	The contents of the W register are AND'ed with register 'f'. If 'd' is '0', the result is stored in the W register. If 'd' is '1', the result is stored back in register 'f'.

BCF	Bit Clear f
Syntax:	[*label*] BCF f,b
Operands:	0 ≤ f ≤ 31 0 ≤ b ≤ 7
Operation:	0 → (f<b>)
Status Affected:	None
Description:	Bit 'b' in register 'f' is cleared.

BSF	Bit Set f
Syntax:	[*label*] BSF f,b
Operands:	0 ≤ f ≤ 31 0 ≤ b ≤ 7
Operation:	1 → (f<b>)
Status Affected:	None
Description:	Bit 'b' in register 'f' is set.

BTFSC	Bit Test f, Skip if Clear
Syntax:	[*label*] BTFSC f,b
Operands:	0 ≤ f ≤ 31 0 ≤ b ≤ 7
Operation:	skip if (f<b>) = 0
Status Affected:	None
Description:	If bit 'b' in register 'f' is '0', then the next instruction is skipped. If bit 'b' is '0', then the next instruction fetched during the current instruction execution is discarded, and a NOP is executed instead, making this a two-cycle instruction.

BTFSS **Bit Test f, Skip if Set**

Syntax: [*label*] BTFSS f,b

Operands: $0 \le f \le 31$
$0 \le b < 7$

Operation: skip if (f<b>) = 1

Status Affected: None

Description: If bit 'b' in register 'f' is '1', then the next instruction is skipped.
If bit 'b' is '1', then the next instruction fetched during the current instruction execution, is discarded and a NOP is executed instead, making this a two-cycle instruction.

CALL **Subroutine Call**

Syntax: [*label*] CALL k

Operands: $0 \le k \le 255$

Operation: (PC) + 1→ Top-of-Stack;
k → PC<7:0>;
(STATUS<6:5>) → PC<10:9>;
0 → PC<8>

Status Affected: None

Description: Subroutine call. First, return address (PC + 1) is PUSHed onto the stack. The eight-bit immediate address is loaded into PC bits <7:0>. The upper bits PC<10:9> are loaded from STATUS<6:5>, PC<8> is cleared. CALL is a two-cycle instruction.

CLRF **Clear f**

Syntax: [*label*] CLRF f

Operands: $0 \le f \le 31$

Operation: 00h → (f);
1 → Z

Status Affected: Z

Description: The contents of register 'f' are cleared and the Z bit is set.

CLRW **Clear W**

Syntax: [*label*] CLRW

Operands: None

Operation: 00h → (W);
1 → Z

Status Affected: Z

Description: The W register is cleared. Zero bit (Z) is set.

CLRWDT **Clear Watchdog Timer**

Syntax: [*label*] CLRWDT

Operands: None

Operation: 00h → WDT;
0 → WDT prescaler (if assigned);
1 → $\overline{TO}$;
1 → $\overline{PD}$

Status Affected: $\overline{TO}$, $\overline{PD}$

Description: The CLRWDT instruction resets the WDT. It also resets the prescaler, if the prescaler is assigned to the WDT and not Timer0. Status bits $\overline{TO}$ and $\overline{PD}$ are set.

COMF **Complement f**

Syntax: [*label*] COMF f,d

Operands: $0 \le f \le 31$
$d \in [0,1]$

Operation: $(\bar{f}) \rightarrow$ (dest)

Status Affected: Z

Description: The contents of register 'f' are complemented. If 'd' is '0', the result is stored in the W register. If 'd' is '1', the result is stored back in register 'f'.

IORWF	Inclusive OR W with f
Syntax:	[*label*] IORWF f,d
Operands:	$0 \le f \le 31$ $d \in [0,1]$
Operation:	(W).OR. (f) → (dest)
Status Affected:	Z
Description:	Inclusive OR the W register with register 'f'. If 'd' is '0', the result is placed in the W register. If 'd' is '1', the result is placed back in register 'f'.

MOVF	Move f
Syntax:	[*label*] MOVF f,d
Operands:	$0 \le f \le 31$ $d \in [0,1]$
Operation:	(f) → (dest)
Status Affected:	Z
Description:	The contents of register 'f' are moved to destination 'd'. If 'd' is '0', destination is the W register. If 'd' is '1', the destination is file register 'f'. 'd' = 1 is useful as a test of a file register, since status flag Z is affected.

MOVLW	Move Literal to W
Syntax:	[*label*] MOVLW k
Operands:	$0 \le k \le 255$
Operation:	k → (W)
Status Affected:	None
Description:	The eight-bit literal 'k' is loaded into the W register. The "don't cares" will assembled as '0's.

MOVWF	Move W to f
Syntax:	[*label*] MOVWF f
Operands:	$0 \le f \le 31$
Operation:	(W) → (f)
Status Affected:	None
Description:	Move data from the W register to register 'f'.

NOP	No Operation
Syntax:	[*label*] NOP
Operands:	None
Operation:	No operation
Status Affected:	None
Description:	No operation.

OPTION	Load OPTION Register
Syntax:	[*label*] OPTION
Operands:	None
Operation:	(W) → OPTION
Status Affected:	None
Description:	The content of the W register is loaded into the OPTION register.

FIGURE 14-1: PIC16F526 VOLTAGE-FREQUENCY GRAPH, -40°C ≤ TA ≤ +125°C

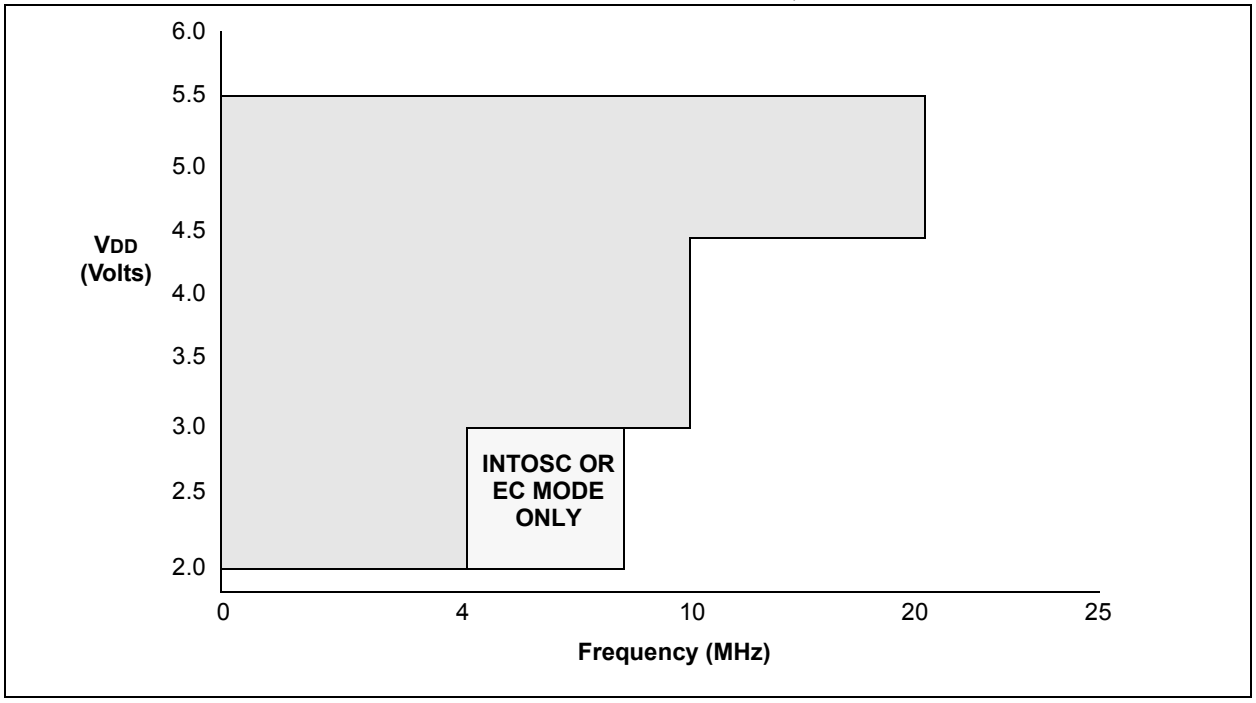


FIGURE 14-2: MAXIMUM OSCILLATOR FREQUENCY TABLE

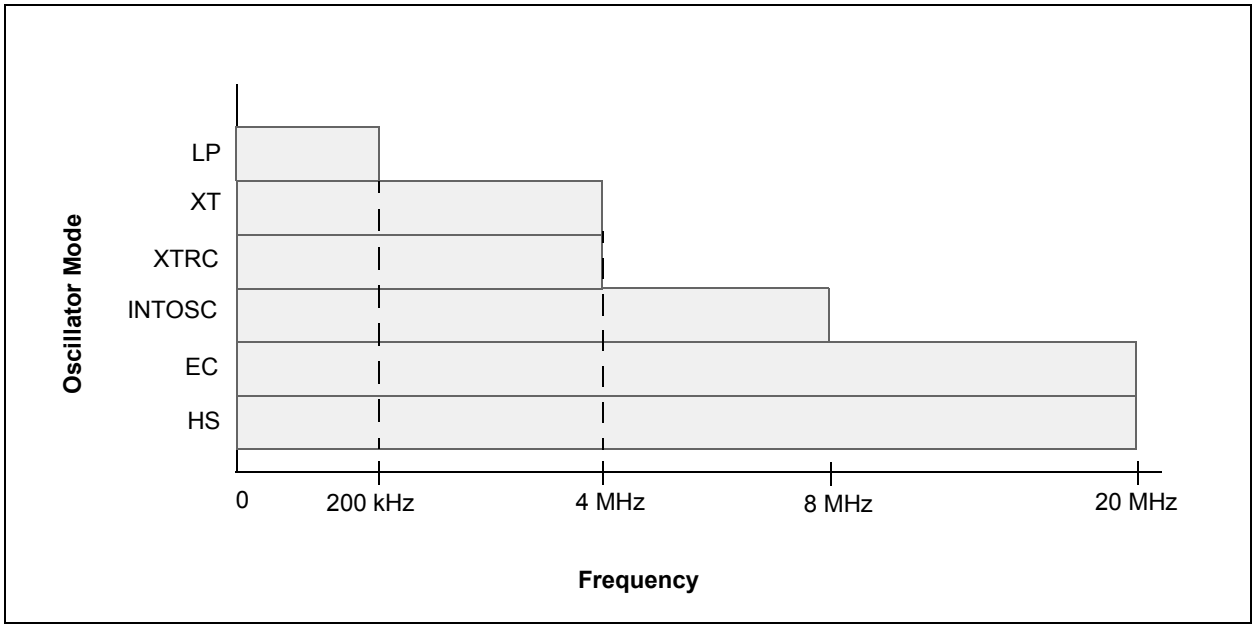


TABLE 14-2: COMPARATOR SPECIFICATIONS.

Comparator Specifications	Standard Operating Conditions (unless otherwise stated) Operating temperature -40°C to 125°C					
Characteristics	**Sym.**	**Min.**	**Typ.**	**Max.**	**Units**	**Comments**
Internal Voltage Reference	VIVRF	0.50	0.60	0.70	V	
Input offset voltage	VOS	—	± 5.0	± 10	mV	
Input common mode voltage*	VCM	0	—	VDD – 1.5	V	
CMRR*	CMRR	55	—	—	db	
Response Time(1)*	TRT	—	150	400	ns	
Comparator Mode Change to Output Valid*	TMC2COV	—	—	10	µs	

* These parameters are characterized but not tested.

Note 1: Response time measured with one comparator input at (VDD – 1.5)/2 while the other input transitions from VSS to VDD – 1.5V.

TABLE 14-3: COMPARATOR VOLTAGE REFERENCE (VREF) SPECIFICATIONS

Sym.	Characteristics	Min.	Typ.	Max.	Units	Comments
CVRES	Resolution	— —	VDD/24* VDD/32	— —	LSb LSb	Low Range (VRR = 1) High Range (VRR = 0)
	Absolute Accuracy(2)	— —	— —	±1/2* ±1/2*	LSb LSb	Low Range (VRR = 1) High Range (VRR = 0)
	Unit Resistor Value (R)	— —	2K*	—	Ω	
	Settling Time(1)	—	—	10*	µs	

* These parameters are characterized but not tested.

Note 1: Settling time measured while VRR = 1 and VR<3:0> transitions from 0000 to 1111.

2: Do not use reference externally when VDD < 2.7V. Under this condition, reference should only be used with comparator Voltage Common mode observed.

FIGURE 14-4: EXTERNAL CLOCK TIMING

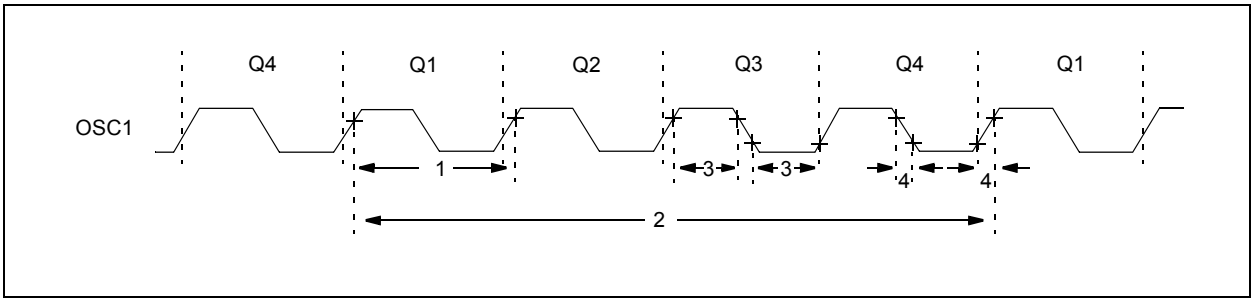


TABLE 14-6: EXTERNAL CLOCK TIMING REQUIREMENTS

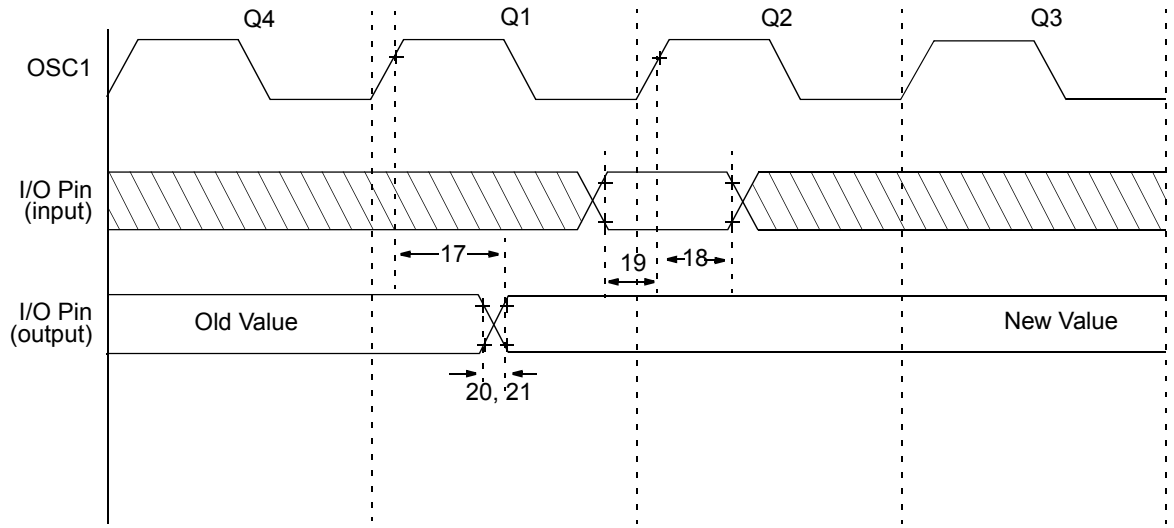
AC CHARACTERISTICS			Standard Operating Conditions (unless otherwise specified) Operating Temperature -40°C ≤ TA ≤ +85°C (industrial), -40°C ≤ TA ≤ +125°C (extended) Operating Voltage VDD range is described in **Section 14.1 "DC Characteristics: PIC16F526 (Industrial)"**				
Param No.	**Sym.**	**Characteristic**	**Min.**	**Typ.(1)**	**Max.**	**Units**	**Conditions**
1A	FOSC	External CLKIN Frequency(2)	DC	—	4	MHz	XT Oscillator mode
			DC	—	20	MHz	HS/EC Oscillator mode
			DC	—	200	kHz	LP Oscillator mode
		Oscillator Frequency(2)	—	—	4	MHz	EXTRC Oscillator mode
			0.1	—	4	MHz	XT Oscillator mode
			4	—	20	MHz	HS/EC Oscillator mode
			—	—	200	kHz	LP Oscillator mode
1	TOSC	External CLKIN Period(2)	250	—	—	ns	XT Oscillator mode
			50	—	—	ns	HS/EC Oscillator mode
			5	—	—	µs	LP Oscillator mode
		Oscillator Period(2)	250	—	—	ns	EXTRC Oscillator mode
			250	—	10,000	ns	XT Oscillator mode
			50	—	250	ns	HS/EC Oscillator mode
			5	—	—	µs	LP Oscillator mode
2	TCY	Instruction Cycle Time	200	4/FOSC	—	ns	
3	TosL, TosH	Clock in (OSC1) Low or High Time	50*	—	—	ns	XT Oscillator
			2*	—	—	µs	LP Oscillator
			10*	—	—	ns	HS/EC Oscillator
4	TosR, TosF	Clock in (OSC1) Rise or Fall Time	—	—	25*	ns	XT Oscillator
			—	—	50*	ns	LP Oscillator
			—	—	15*	ns	HS/EC Oscillator

* These parameters are characterized but not tested.

Note 1: 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.

2: All specified values are based on characterization data for that particular oscillator type under standard operating conditions with the device executing code. Exceeding these specified limits may result in an unstable oscillator operation and/or higher than expected current consumption. When an external clock input is used, the "max" cycle time limit is "DC" (no clock) for all devices.

FIGURE 14-5: I/O TIMING



Note: All tests must be done with specified capacitive loads (see data sheet) 50 pF on I/O pins and CLKOUT.

TABLE 14-8: TIMING REQUIREMENTS

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 14.1 "DC Characteristics: PIC16F526 (Industrial)"**				
Param No.	**Sym.**	**Characteristic**	**Min.**	**Typ.(1)**	**Max.**	**Units**
17	TosH2ioV	OSC1↑ (Q1 cycle) to Port Out Valid(2), (3)	—	—	100*	ns
18	TosH2ioI	OSC1↑ (Q2 cycle) to Port Input Invalid (I/O in hold time)(2)	50	—	—	ns
19	TioV2osH	Port Input Valid to OSC1↑ (I/O in setup time)	20	—	—	ns
20	TioR	Port Output Rise Time(3)	—	10	50**	ns
21	TioF	Port Output Fall Time(3)	—	10	58**	ns

* These parameters are characterized but not tested.

** These parameters are design targets and are not tested.

Note 1: 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.

2: Measurements are taken in EXTRC mode.

3: See Figure 14-3 for loading conditions.

FIGURE 14-7: TIMER0 CLOCK TIMINGS

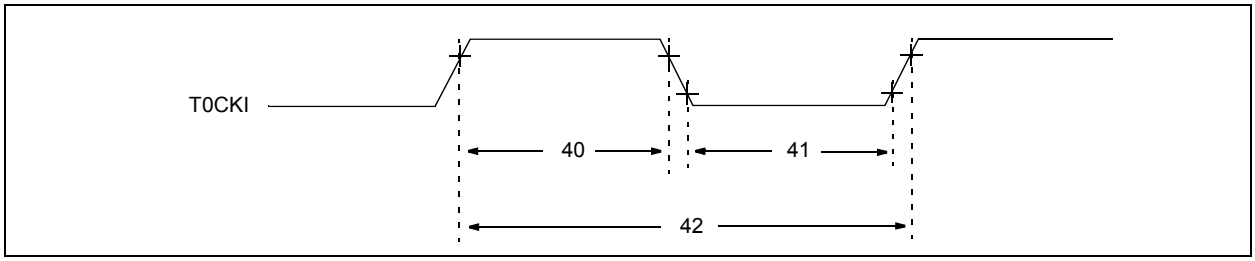


TABLE 14-10: TIMER0 CLOCK REQUIREMENT

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 14.1 "DC Characteristics: PIC16F526 (Industrial)"**				
Param No.	**Sym.**	**Characteristic**		**Min.**	**Typ.(1)**	**Max.**	**Units**	**Conditions**
40	Tt0H	T0CKI High Pulse Width	No Prescaler	0.5 TCY + 20*	—	—	ns	
			With Prescaler	10*	—	—	ns	
41	Tt0L	T0CKI Low Pulse Width	No Prescaler	0.5 TCY + 20*	—	—	ns	
			With Prescaler	10*	—	—	ns	
42	Tt0P	T0CKI Period		20 or TCY + 40* N	—	—	ns	Whichever is greater. N = Prescale Value (1, 2, 4,..., 256)

* These parameters are characterized but not tested.

Note 1: 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.

FIGURE 15-11: VOL vs. IOL OVER TEMPERATURE (VDD = 3.0V)

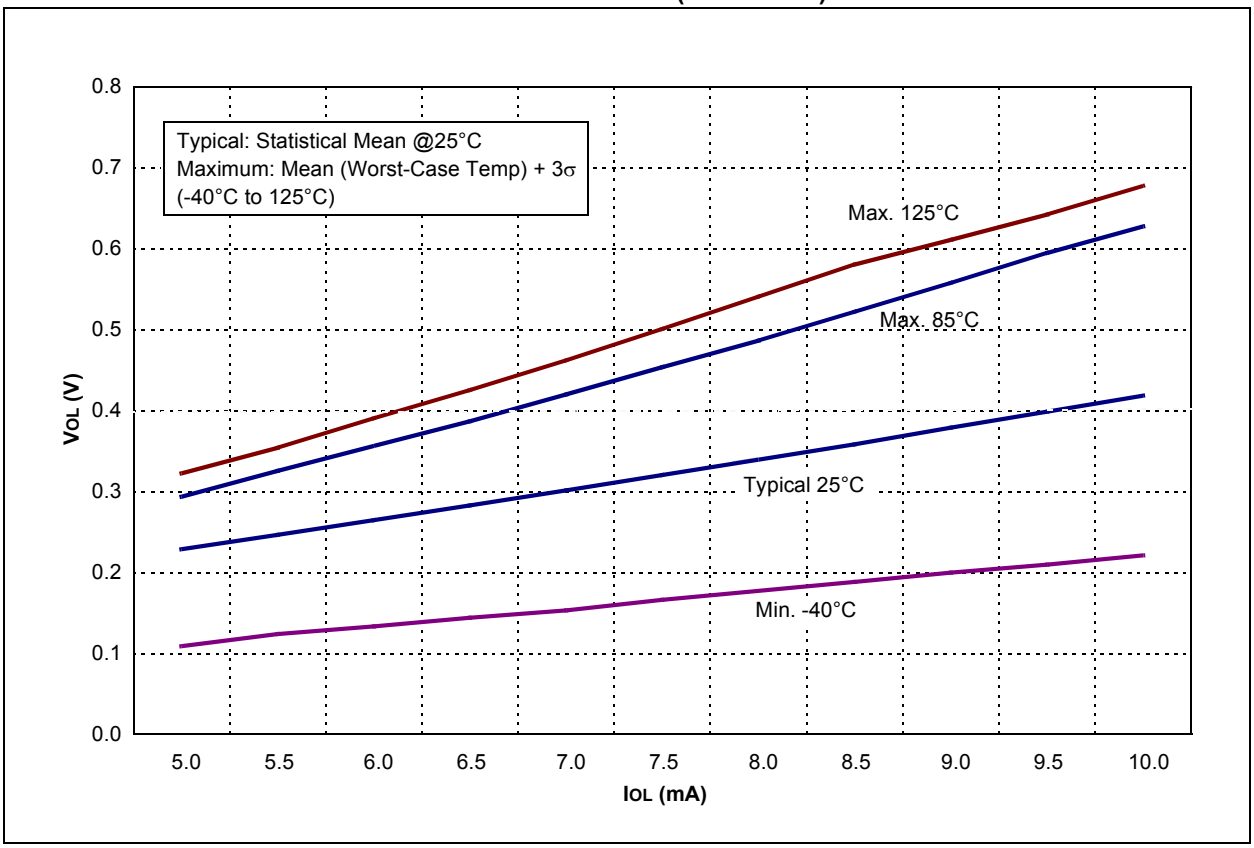
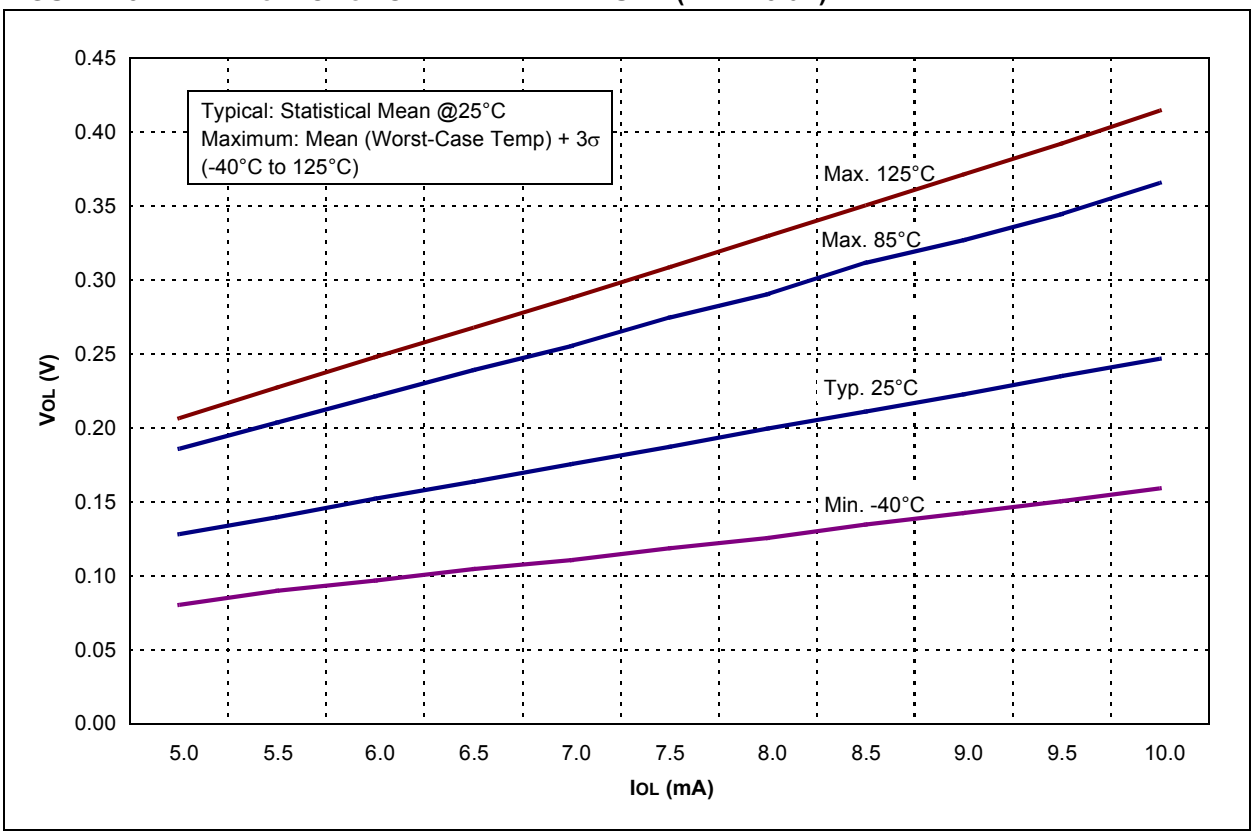
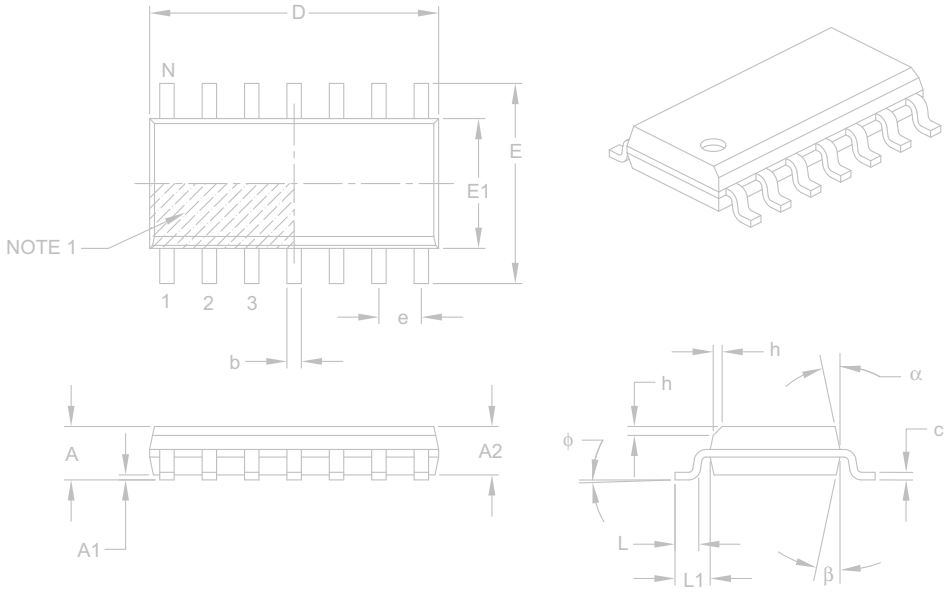


FIGURE 15-12: VOL vs. IOL OVER TEMPERATURE (VDD = 5.0V)



14-Lead Plastic Small Outline (SL) – Narrow, 3.90 mm Body [SOIC]

Note: For the most current package drawings, please see the Microchip Packaging Specification located at http://www.microchip.com/packaging



Units		MILLIMETERS		
Dimension Limits		MIN	NOM	MAX
Number of Pins	N		14	
Pitch	e		1.27 BSC	
Overall Height	A	–	–	1.75
Molded Package Thickness	A2	1.25	–	–
Standoff §	A1	0.10	–	0.25
Overall Width	E		6.00 BSC	
Molded Package Width	E1		3.90 BSC	
Overall Length	D		8.65 BSC	
Chamfer (optional)	h	0.25	–	0.50
Foot Length	L	0.40	–	1.27
Footprint	L1		1.04 REF	
Foot Angle	φ	0°	–	8°
Lead Thickness	c	0.17	–	0.25
Lead Width	b	0.31	–	0.51
Mold Draft Angle Top	α	5°	–	15°
Mold Draft Angle Bottom	β	5°	–	15°

Notes:

1. Pin 1 visual index feature may vary, but must be located within the hatched area.
2. § Significant Characteristic.
3. Dimensions D and E1 do not include mold flash or protrusions. Mold flash or protrusions shall not exceed 0.15 mm per side.
4. Dimensioning and tolerancing per ASME Y14.5M.

   BSC: Basic Dimension. Theoretically exact value shown without tolerances.

   REF: Reference Dimension, usually without tolerance, for information purposes only.

Microchip Technology Drawing C04-065B

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