



PIC18(L)F2X/4X/5XK42

Highly Integrated 8-Bit PIC[®] Microcontrollers in 28- to 48- Pins

Description

The PIC18(L)F2X/4X/5XK42 microcontroller family is available in 28/40/44/48-pin devices. This family features a 12-bit ADC with Computation (ADC²) automating Capacitive Voltage Divider (CVD) techniques for advanced touch sensing, averaging, filtering, oversampling and threshold comparison. Additionally, Vectored Interrupt Controller with fixed latency for handling interrupts, System Bus Arbiter, Direct Memory Access capabilities, UART with support for Asynchronous, DMX, DALI and LIN protocols, SPI, I²C, memory features like Memory Access Partition (MAP) to support customers in data protection and bootloader applications, Device Information Area (DIA) which stores factory calibration values to help improve temperature sensor accuracy.

Core Features

- C Compiler Optimized RISC Architecture
- Operating Speed:
 - Up to 64 MHz clock input
 - 62.5 ns minimum instruction cycle
- Two Direct Memory Access (DMA) Controllers:
 - Data transfers to SFR/GPR spaces from either Program Flash Memory, Data EEPROM or SFR/GPR spaces
 - User programmable source and destination sizes
 - Hardware and software triggered data transfers
- Vectored Interrupt Capability:
 - Selectable high/low priority
 - Fixed Interrupt latency
 - Programmable vector table base address
- 31-Level Deep Hardware Stack
- Low-Current Power-on Reset (POR)
- Configurable Power-up Timer (PWRT)
- Brown-Out Reset (BOR)
- Low-Power BOR (LPBOR) Option
- Windowed Watchdog Timer (WWDT):
 - Variable prescaler selection
 - Variable window size selection
 - Configurable in hardware or software
- Programmable Code Protection:
 - Configurable Boot and App region sizes

Memory

- Up to 128 KB Flash Program Memory
- Up to 8 KB Data SRAM Memory
- Up to 1 KB Data EEPROM
- Memory Access Partition (MAP):
 - Bootloader write-protect
 - Configurable partition
- Device Information Area (DIA) Stores:
 - Temp sensor factory calibrated data
 - Fixed Voltage Reference
 - Device ID

Operating Characteristics

- Operating Voltage Range:
 - 1.8V to 3.6V (PIC18LF2X/4X/5XK42)
 - 2.3V to 5.5V (PIC18F2X/4X/5XK42)
- Temperature Range:
 - Industrial: -40°C to 85°C
 - Extended: -40°C to 125°C

Power-Saving Functionality

- DOZE mode: Ability to run CPU core slower than the system clock
- IDLE mode: Ability to halt CPU core while internal peripherals continue operating
- Sleep mode: Lowest power consumption
- Peripheral Module Disable (PMD):
 - Ability to disable peripherals to minimize power consumption

eXtreme Low-Power (XLP) Features

- Sleep mode: 50 nA @ 1.8V, typical
- Watchdog Timer: 500 nA @ 1.8V, typical
- Secondary Oscillator: 500 nA @ 32 kHz
- Operating Current:
 - 8 uA @ 32 kHz, 1.8V, typical
 - 32 uA/MHz @ 1.8V, typical

Digital Peripherals

- Three 8-Bit Timers (TMR2/4/6) with Hardware Limit Timer (HLT)
- Four 16-Bit Timers (TMR0/1/3/5)
- Four Configurable Logic Cell (CLC):
 - Integrated combinational and sequential logic
- Three Complementary Waveform Generators (CWGs):
 - Rising and falling edge dead-band control
 - Full-bridge, half-bridge, 1-channel drive
 - Multiple signal sources
 - Programmable dead band
 - Fault-shutdown input
- Four 16-Bit Capture/Compare/16-Bit PWM (CCP) modules
- Four 10-bit Pulse Width Modulators (PWMs)

PIC18(L)F2X/4X/5XK42

Digital Peripherals (Continued)

- Numerically Controlled Oscillator (NCO):
 - Generates true linear frequency control and increased frequency resolution
 - Input Clock: $0 \text{ Hz} < f_{\text{NCO}} < 64 \text{ MHz}$
 - Resolution: $f_{\text{NCO}}/220$
- DSM: Data Signal Modulator:
 - Multiplex two carrier clocks, with glitch prevention feature
 - Multiple sources for each carrier
- Programmable CRC with Memory Scan:
 - Reliable data/program memory monitoring for fail-safe operation (e.g., Class B)
 - Calculate CRC over any portion of Flash
- Two UART Modules:
 - Asynchronous UART, RS-232, RS-485 compatible.
 - One of the UART modules supports LIN master and slave, DMX mode, DALI gear and device protocols
 - Automatic and user timed BREAK period generation
 - DMA compatible
 - Automatic checksums
 - Programmable 1, 1.5, and 2 Stop bits
 - Wake-up on BREAK reception
- One SPI module:
 - Configurable length bytes
 - Arbitrary length data packets
 - Receive-without-transmit option
 - Transmit-without-receive option
 - Transfer byte counter
 - Separate transmit and receive buffers with 2-byte FIFO and DMA capabilities
- Two I²C modules, SMBus, PMBus™ compatible:
 - Dedicated address, transmit and receive buffers
 - Bus collision detection with arbitration
 - Bus time-out detection and handling
 - I²C, SMBus 2.0 and SMBus 3.0, and 1.8V input level selections
 - Multi-Master mode, including self-addressing
- Device I/O Port Features:
 - 25 I/O pins (PIC18(L)F24/25/26/27K42)
 - 36 I/O pins (PIC18(L)F45/46/47K42)
 - 44 I/O pins (PIC18(L)F55/56/57K42)
 - One input-only pin
 - Individually programmable I/O direction, controlled current, open-drain, slew rate, weak pull-up control
 - Interrupt-on-change
 - Three external interrupt pins
- Peripheral Pin Select (PPS):
 - Enables pin mapping of digital I/O

- Signal Measurement Timer (SMT):
 - 24-bit timer/counter with prescaler

Analog Peripherals

- Analog-to-Digital Converter with Computation (ADC²):
 - 12-bit with up to 43 external channels
 - Automated post-processing
 - Automates math functions on input signals: averaging, filter calculations, oversampling and threshold comparison
 - Operates in Sleep
 - Temperature Sensor
 - Internal connection to ADC
 - Can be calibrated for improved accuracy
 - Hardware Capacitive Voltage Divider (CVD):
 - Automates touch sampling and reduces software size and CPU usage when touch or proximity sensing is required
 - Adjustable sample and hold capacitor array
 - Two guard ring output drives
- Two Comparators:
 - Comparator Hysteresis enable
 - Invert output polarity
 - Comparator outputs externally accessible
- 5-Bit Digital-to-Analog Converter (DAC):
 - 5-bit resolution, rail-to-rail
 - Unbuffered I/O pin output
 - Internal connections to ADCs and comparators
- Voltage Reference:
 - Fixed Voltage Reference with 1.024V, 2.048V and 4.096V output levels
 - Connection to ADC, Comp and DAC

Flexible Oscillator Structure

- High-Precision Internal Oscillator:
 - Selectable frequency range up to 64 MHz
 - Safe clock switching while running
 - $\pm 1\%$ at calibration (nominal)
- Low-Power Internal 32 kHz Oscillator (LFINTOSC)
- External 32 kHz Crystal Oscillator
- External Oscillator Block with:
 - x4 PLL with external sources
 - Three crystal/resonator modes up to 20 MHz
 - Three external clock modes up to 20 MHz
- Fail-Safe Clock Monitor
 - Allows for safe shutdown if peripherals clock stops
- Oscillator Start-up Timer (OST)
 - Ensures stability of crystal oscillator sources

TABLE 1: PIC18(L)F2X/4X/5XK42 FAMILY TYPES

Device	Data Sheet Index	Program Flash Memory (KB)	Data EEPROM (B)	Data SRAM (bytes)	I/O Pins	12-bit ADC ² (ch)	5-bit DAC	Comparator	8-bit/16-bit Timer	Window Watchdog Timer (WWDT)	Signal Measurement Timer (SMT)	CCP/10-bit PWM	CWG	NCO	CLC	Zero-Cross Detect	Direct Memory Access (DMA) (channels)	Memory Access Partition	Vectored Interrupts	UART/UART with LIN, DMX, DALI Protocol Support	I ² C/SPI	Peripheral Pin Select	Peripheral Module Disable	Debug ⁽¹⁾
PIC18(L)F24K42	A	16	256	1024	25	24	1	2	3/4	Y	Y	4/4	3	1	4	Y	2	Y	Y	1/1	2/1	Y	Y	I
PIC18(L)F25K42	A	32	256	2048	25	24	1	2	3/4	Y	Y	4/4	3	1	4	Y	2	Y	Y	1/1	2/1	Y	Y	I
PIC18(L)F26K42	B	64	1024	4096	25	24	1	2	3/4	Y	Y	4/4	3	1	4	Y	2	Y	Y	1/1	2/1	Y	Y	I
PIC18(L)F27K42	C	128	1024	8192	25	24	1	2	3/4	Y	Y	4/4	3	1	4	Y	2	Y	Y	1/1	2/1	Y	Y	I
PIC18(L)F45K42	B	32	256	2048	36	35	1	2	3/4	Y	Y	4/4	3	1	4	Y	2	Y	Y	1/1	2/1	Y	Y	I
PIC18(L)F46K42	B	64	1024	4096	36	35	1	2	3/4	Y	Y	4/4	3	1	4	Y	2	Y	Y	1/1	2/1	Y	Y	I
PIC18(L)F47K42	C	128	1024	8192	36	35	1	2	3/4	Y	Y	4/4	3	1	4	Y	2	Y	Y	1/1	2/1	Y	Y	I
PIC18(L)F55K42	B	32	1024	2048	44	43	1	2	3/4	Y	Y	4/4	3	1	4	Y	2	Y	Y	1/1	2/1	Y	Y	I
PIC18(L)F56K42	B	64	1024	4096	44	43	1	2	3/4	Y	Y	4/4	3	1	4	Y	2	Y	Y	1/1	2/1	Y	Y	I
PIC18(L)F57K42	C	128	1024	8192	44	43	1	2	3/4	Y	Y	4/4	3	1	4	Y	2	Y	Y	1/1	2/1	Y	Y	I

Note 1: I – Debugging integrated on chip.

Data Sheet Index:

- A:** Future Release [PIC18\(L\)F24/44K42 Data Sheet, 28-Pin](#)
B: Future Release [PIC18\(L\)F26/45/55/46/56K42 Data Sheet, 48-Pin](#)
C: Future Release [PIC18\(L\)F27/47/57K42 Data Sheet, 48-Pin](#)

Note: For other small form-factor package availability and marking information, please visit www.microchip.com/packaging or contact your local sales office.

PIC18(L)F2X/4X/5XK42

TABLE 2: PACKAGES

Device	(S)PDIP	SOIC	SSOP	UQFN (4x4)	QFN (6x6)	TQFP	QFN (8x8)	UQFN (5x5)	UQFN (6x6)
PIC18(L)F24K42	X	X	X	X	X	—	—	—	—
PIC18(L)F25K42	X	X	X	X	X	—	—	—	—
PIC18(L)F26K42	X	X	X	X	—	—	—	—	—
PIC18(L)F27K42	X	X	X	—	X	—	—	—	—
PIC18(L)F45K42	X	—	—	—	—	X	X	X	—
PIC18(L)F46K42	X	—	—	—	—	X	X	X	—
PIC18(L)F47K42	X	—	—	—	—	X	X	X	—
PIC18(L)F55K42	X	—	—	—	—	X	X	—	X
PIC18(L)F56K42	X	—	—	—	—	X	X	—	X
PIC18(L)F57K42	X	—	—	—	—	X	X	—	X

Note: Pin details are subject to change.

PIN DIAGRAMS

FIGURE 1: 28-PIN SPDIP, SOIC, SSOP FOR PIC18(L)F2XK42

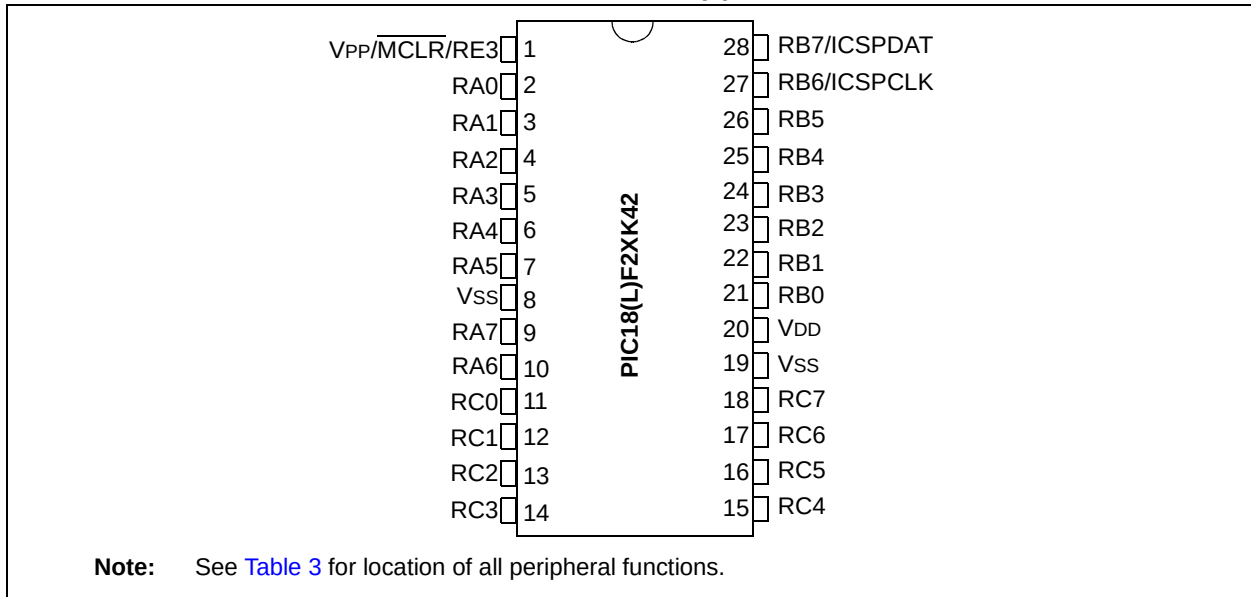
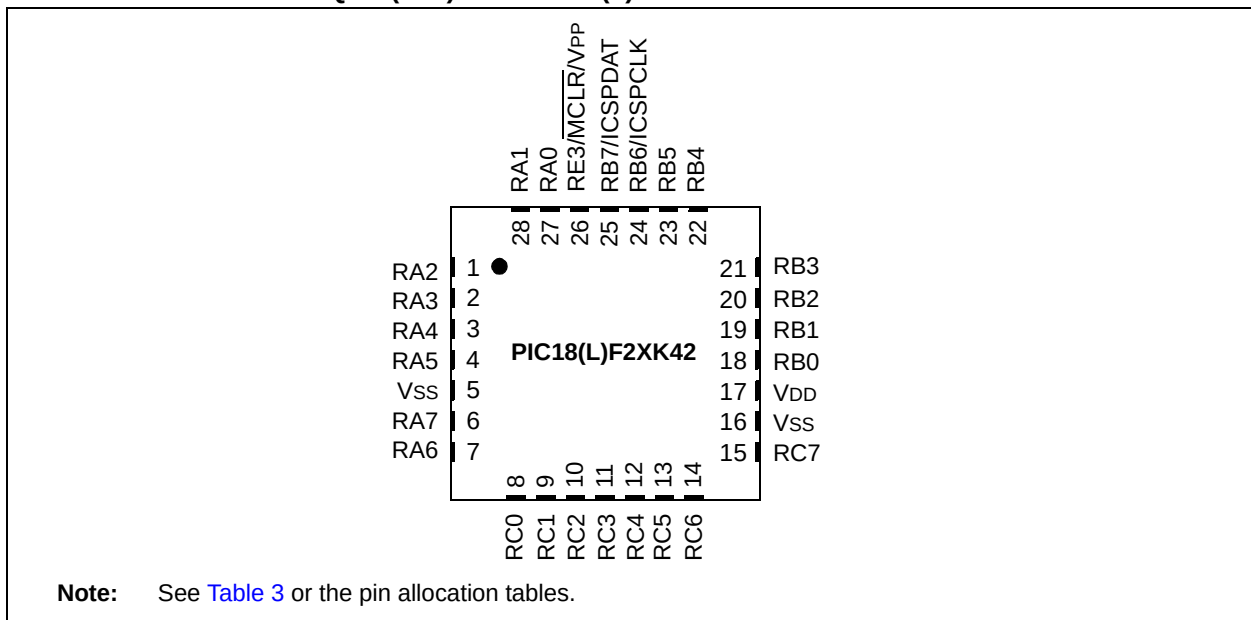


FIGURE 2: 28-PIN UQFN (4X4) FOR PIC18(L)F2XK42



PIC18(L)F2X/4X/5XK42

FIGURE 3: 28-PIN QFN (6X6X0.9 mm) FOR PIC18(L)F2XK42

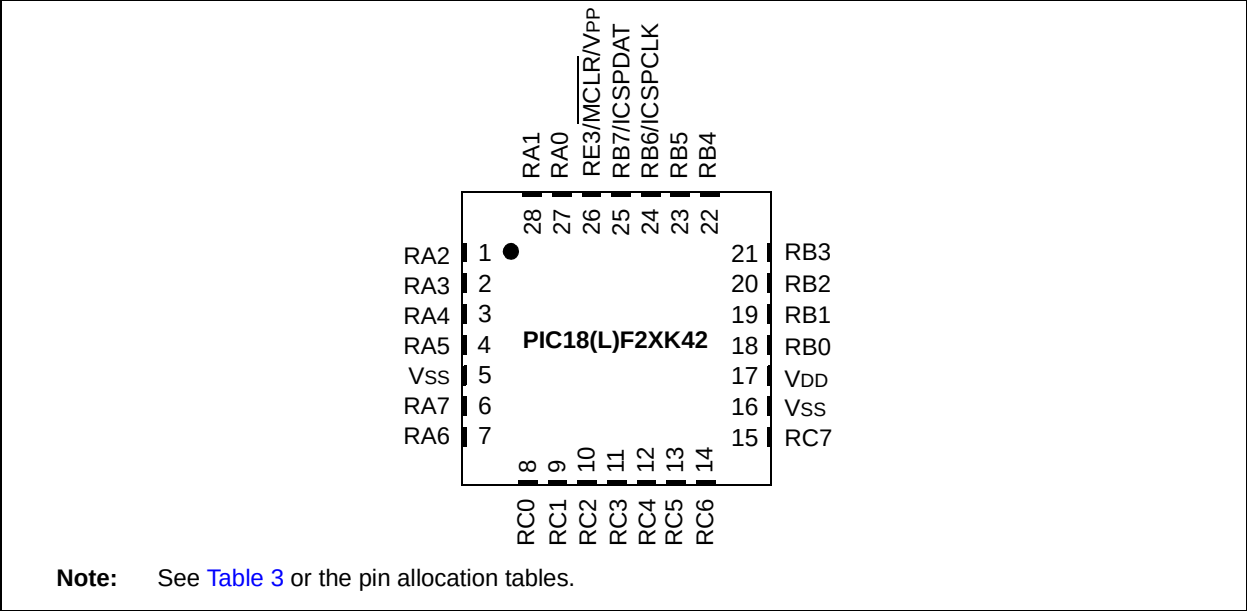
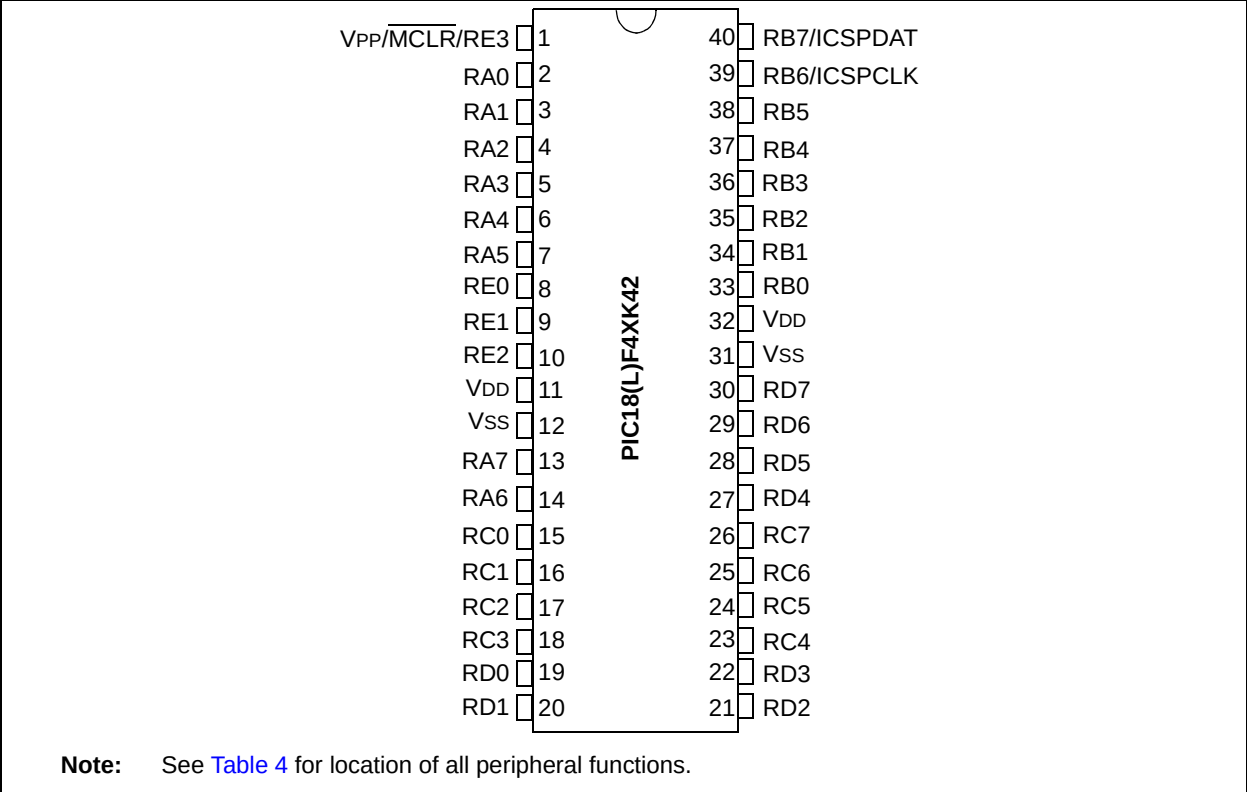


FIGURE 4: 40-PIN PDIP FOR PIC18(L)F4XK42



PIC18(L)F2X/4X/5XK42

FIGURE 5: 40-PIN UQFN (5X5X0.5 mm) FOR PIC18(L)F4XK42

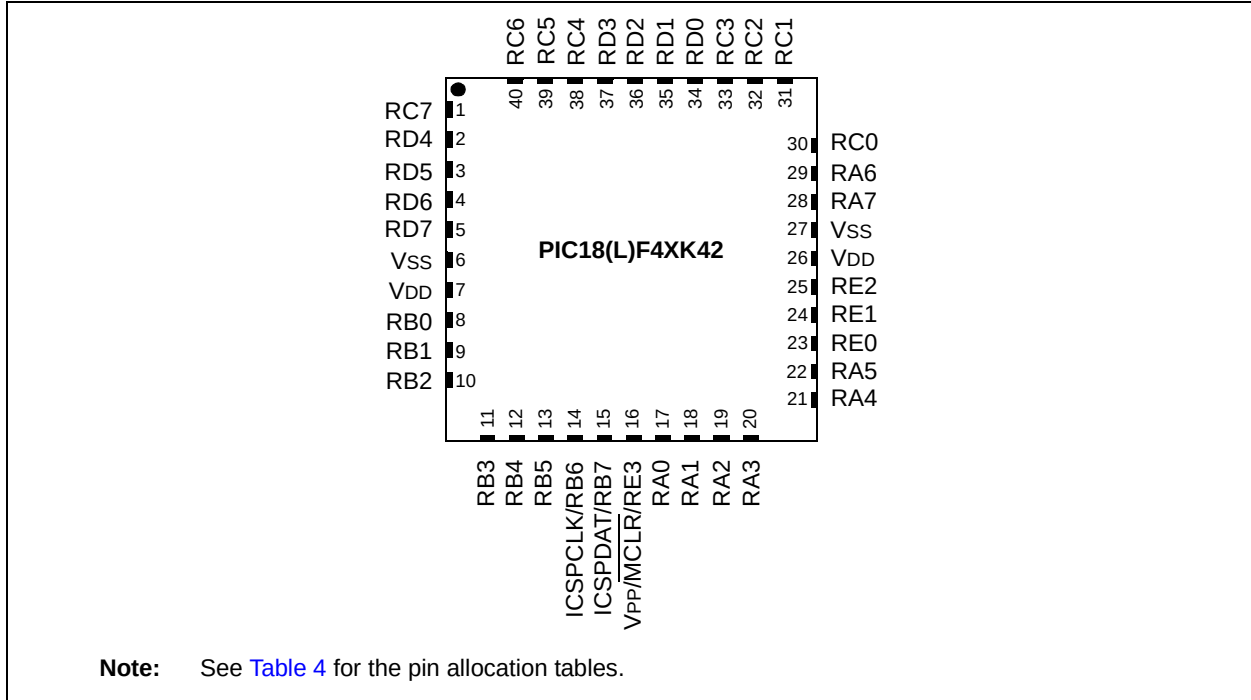
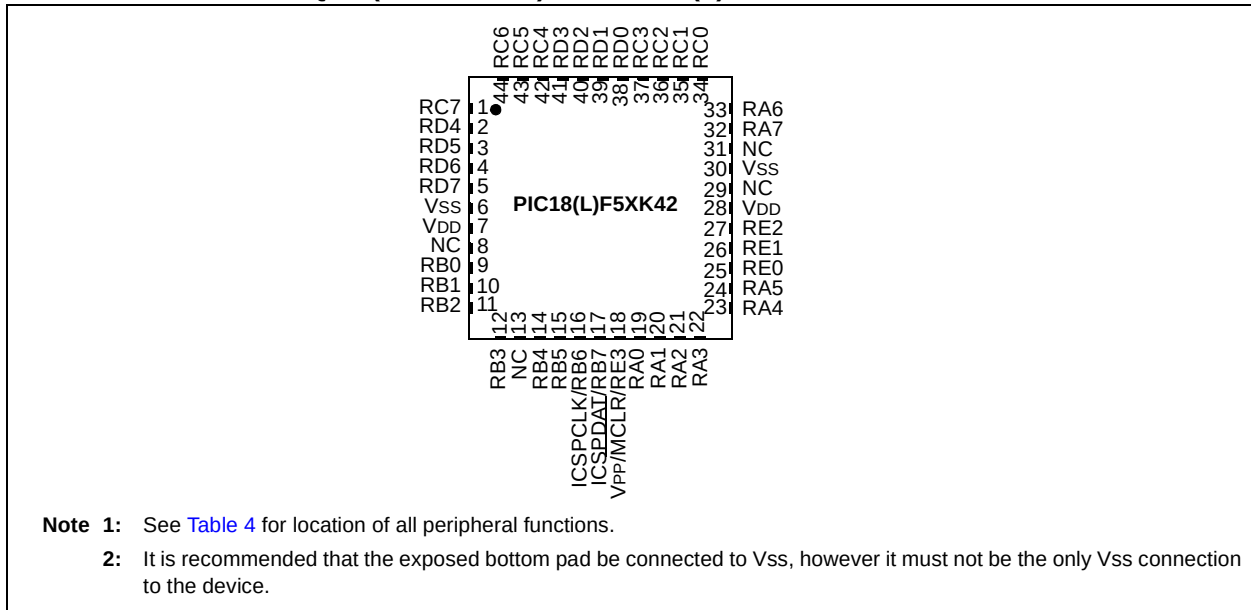


FIGURE 6: 44-PIN QFN (8X8X0.9 mm) FOR PIC18(L)F5XK42



PIC18(L)F2X/4X/5XK42

FIGURE 7: 44-PIN TQFP FOR PIC18(L)F4XK42

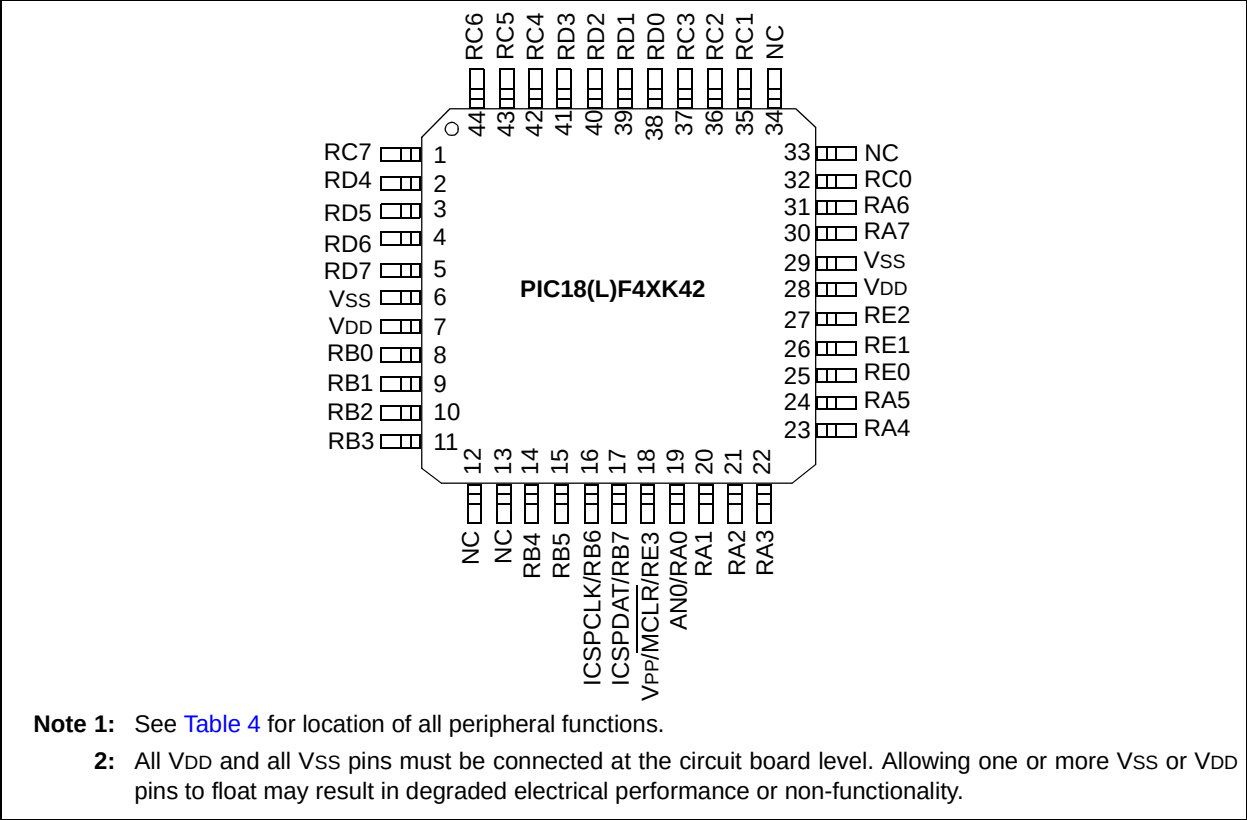
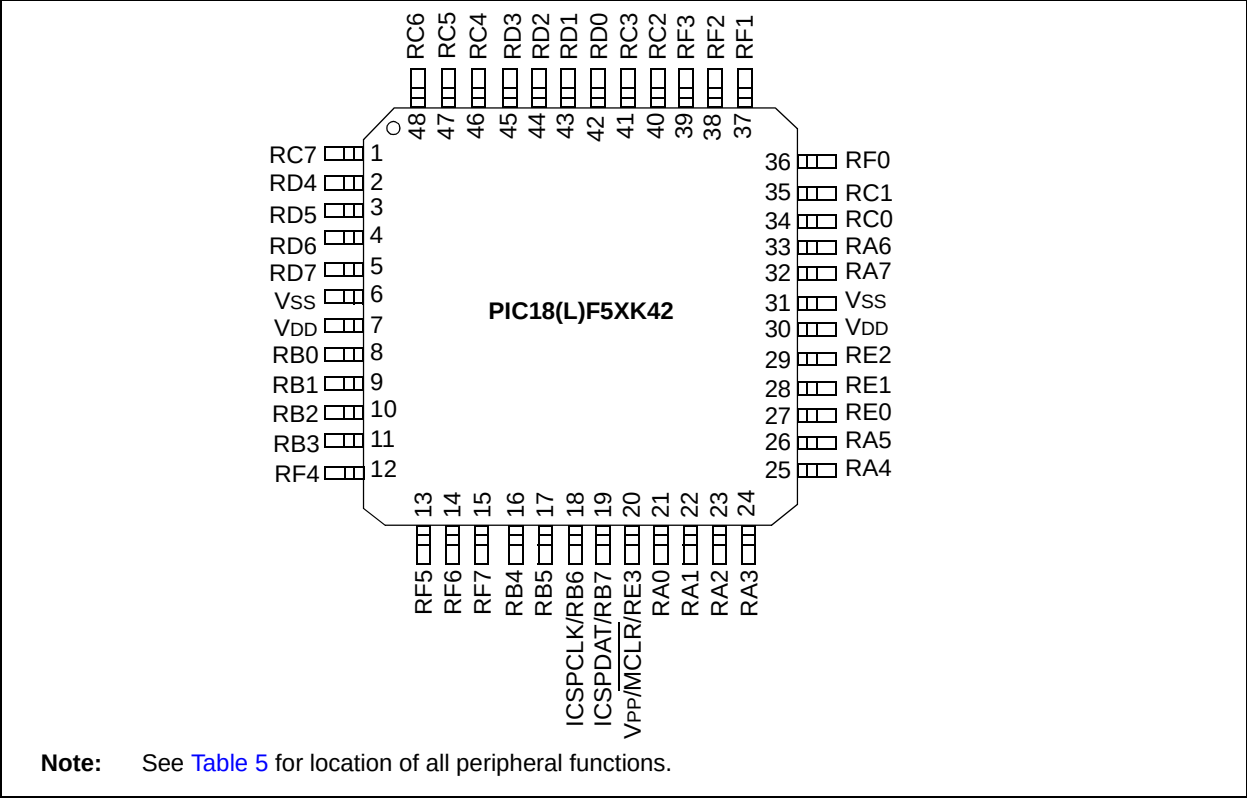


FIGURE 8: 48-PIN TQFP/UQFN FOR PIC18(L)F5XK42



PIN ALLOCATION TABLES

TABLE 3: 28-PIN ALLOCATION TABLE (PIC18(L)F2XK42)

I/O	28-Pin SPDIP/SOIC/SSOP	28-Pin (U)QFN	ADC	Voltage Reference	DAC	Comparators	Zero Cross Detect	I ² C	SPI	UART	DSM	Timers/SMT	CCP and PWM	CWG	CLC	NCO	Clock Reference (CLKR)	Interrupt-on-Change	Basic
RA0	2	27	ANA0	—	—	C1IN0-C2IN0-	—	—	—	—	—	—	—	—	CLCIN0 ⁽¹⁾	—	—	IOCA0	—
RA1	3	28	ANA1	—	—	C1IN1-C2IN1-	—	—	—	—	—	—	—	—	CLCIN1 ⁽¹⁾	—	—	IOCA1	—
RA2	4	1	ANA2	VREF-	DAC1OUT1	C1IN0+ C2IN0+	—	—	—	—	—	—	—	—	—	—	—	IOCA2	—
RA3	5	2	ANA3	VREF+	—	C1IN1+	—	—	—	—	MDCARL ⁽¹⁾	—	—	—	—	—	—	IOCA3	—
RA4	6	3	ANA4	—	—	—	—	—	—	—	MDCARH ⁽¹⁾	T0CKI ⁽¹⁾	—	—	—	—	—	IOCA4	—
RA5	7	4	ANA5	—	—	—	—	—	SS1 ⁽¹⁾	—	MDSRC ⁽¹⁾	—	—	—	—	—	—	IOCA5	—
RA6	10	7	ANA6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	IOCA6	OSC2 CLKOUT
RA7	9	6	ANA7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	IOCA7	OSC1 CLKIN
RB0	21	18	ANB0	—	—	C2IN1+	ZCD	—	—	—	—	—	CCP4 ⁽¹⁾	CWG1IN ⁽¹⁾	—	—	—	INT0 ⁽¹⁾ IOCB0	—
RB1	22	19	ANB1	—	—	C1IN3-C2IN3-	—	SCL2 ^(3,4)	—	—	—	—	—	CWG2IN ⁽¹⁾	—	—	—	INT1 ⁽¹⁾ IOCB1	—
RB2	23	20	ANB2	—	—	—	—	SDA2 ^(3,4)	—	—	—	—	—	CWG3IN ⁽¹⁾	—	—	—	INT2 ⁽¹⁾ IOCB2	—
RB3	24	21	ANB3	—	—	C1IN2-C2IN2-	—	—	—	—	—	—	—	—	—	—	—	IOCB3	—
RB4	25	22	ANB4 ADCACT ⁽¹⁾	—	—	—	—	—	—	—	—	T5G ⁽¹⁾	—	—	—	—	—	IOCB4	—
RB5	26	23	ANB5	—	—	—	—	—	—	—	—	T1G ⁽¹⁾	CCP3 ⁽¹⁾	—	—	—	—	IOCB5	—
RB6	27	24	ANB6	—	—	—	—	—	—	CTS2 ⁽¹⁾	—	—	—	—	CLCIN2 ⁽¹⁾	—	—	IOCB6	ICSPCLK
RB7	28	25	ANB7	—	DAC1OUT2	—	—	—	—	RX2 ⁽¹⁾	—	T6IN(1)	—	—	CLCIN3 ⁽¹⁾	—	—	IOCB7	ICSPDAT

- Note**
- 1: This is a PPS remappable input signal. The input function may be moved from the default location shown to one of several other PORTx pins.
 - 2: All output signals shown in this row are PPS remappable.
 - 3: This is a bidirectional signal. For normal module operation, the firmware should map this signal to the same pin in both the PPS input and PPS output registers.
 - 4: These pins are configured for I²C and SMBus 3.0/2.0 logic levels; The SCLx/SDAx signals may be assigned to any of the RB1/RB2/RC3/RC4 pins. PPS assignments to the other pins (e.g., RA5) will operate, but input logic levels will be standard TTL/ST as selected by the INLVL register, instead of the I²C specific or SMBus input buffer thresholds.

TABLE 3: 28-PIN ALLOCATION TABLE (PIC18(L)F2XK42) (CONTINUED)

I/O	28-Pin SPDIP/SOIC/SSOP	28-Pin (U)QFN	ADC	Voltage Reference	DAC	Comparators	Zero Cross Detect	I ² C	SPI	UART	DSM	Timers/SMT	CCP and PWM	CWG	CLC	NCO	Clock Reference (CLKR)	Interrupt-on-Change	Basic
RC0	11	8	ANC0	—	—	—	—	—	—	—	—	T1CK ⁽¹⁾ T3CK ⁽¹⁾ T3G ⁽¹⁾ SMTWIN1 ⁽¹⁾	—	—	—	—	—	IOCC0	SOSCO
RC1	12	9	ANC1	—	—	—	—	—	—	—	—	SMTSIG1 ⁽¹⁾	CCP2 ⁽¹⁾	—	—	—	—	IOCC1	SOSCI
RC2	13	10	ANC2	—	—	—	—	—	—	—	—	T5CK ⁽¹⁾	CCP1 ⁽¹⁾	—	—	—	—	IOCC2	—
RC3	14	11	ANC3	—	—	—	—	SCL1 ^(3,4)	SCK1 ⁽¹⁾	—	—	T2IN ⁽¹⁾	—	—	—	—	—	IOCC3	—
RC4	15	12	ANC4	—	—	—	—	SDA1 ^(3,4)	SDI1 ⁽¹⁾	—	—	—	—	—	—	—	—	IOCC4	—
RC5	16	13	ANC5	—	—	—	—	—	—	—	—	T4IN ⁽¹⁾	—	—	—	—	—	IOCC5	—
RC6	17	14	ANC6	—	—	—	—	—	—	CTS1 ⁽¹⁾	—	—	—	—	—	—	—	IOCC6	—
RC7	18	15	ANC7	—	—	—	—	—	—	RX1 ⁽¹⁾	—	—	—	—	—	—	—	IOCC7	—
RE3	1	26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	IOCE3	MCLR V _{PP}
VDD	20	17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
VSS	8, 19	5, 16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
OUT ⁽²⁾	—	—	ADGRDA ADGRDB	—	—	C1OUT C2OUT	—	SDA1 SCL1 SDA2 SCL2	SS1 SCK1 SDO1	RTS1 TXDE1 TX1 RTS2 TXDE2 TX2	DSM	TMR0	CCP1 CCP2 CCP3 CCP4 PWM5OUT PWM6OUT PWM7OUT PWM8OUT	CWG1A CWG1B CWG1C CWG1D CWG2A CWG2B CWG2C CWG2D CWG3A CWG3B CWG3C CWG3D	CLC1OUT CLC2OUT CLC3OUT CLC4OUT	NCO	CLKR	—	—

- Note**
- 1: This is a PPS remappable input signal. The input function may be moved from the default location shown to one of several other PORTx pins.
 - 2: All output signals shown in this row are PPS remappable.
 - 3: This is a bidirectional signal. For normal module operation, the firmware should map this signal to the same pin in both the PPS input and PPS output registers.
 - 4: These pins are configured for I²C and SMBus 3.0/2.0 logic levels; The SCLx/SDAx signals may be assigned to any of the RB1/RB2/RC3/RC4 pins. PPS assignments to the other pins (e.g., RA5) will operate, but input logic levels will be standard TTL/ST as selected by the INLVL register, instead of the I²C specific or SMBus input buffer thresholds.

TABLE 4: 40/44-PIN ALLOCATION TABLE FOR PIC18(L)F4XK42, PIC18(L)F5XK42

I/O	40-Pin PDIP	44-Pin TQFP	40-Pin UQFN	44-Pin QFN	ADC	Voltage Reference	DAC	Comparators	Zero Cross Detect	I ² C	SPI	UART	DSM	Timers/SMT	CCP and PWM	CWG	CLC	NCO	Clock Reference (CLKR)	Interrupt-on-Change	Basic
RA0	2	19	17	19	ANA0	—	—	C1IN0- C2IN0-	—	—	—	—	—	—	—	—	CLCIN0 ⁽¹⁾	—	—	IOCA0	—
RA1	3	20	18	20	ANA1	—	—	C1IN1- C2IN1-	—	—	—	—	—	—	—	—	CLCIN1 ⁽¹⁾	—	—	IOCA1	—
RA2	4	21	19	21	ANA2	VREF-	DAC1OUT1	C1IN0+ C2IN0+	—	—	—	—	—	—	—	—	—	—	—	IOCA2	—
RA3	5	22	20	22	ANA3	VREF+	—	C1IN1+	—	—	—	—	MDCARL ⁽¹⁾	—	—	—	—	—	—	IOCA3	—
RA4	6	23	21	23	ANA4	—	—	—	—	—	—	—	MDCARH ⁽¹⁾	T0CKI ⁽¹⁾	—	—	—	—	—	IOCA4	—
RA5	7	24	22	24	ANA5	—	—	—	—	—	SS1 ⁽¹⁾	—	MDSRC ⁽¹⁾	—	—	—	—	—	—	IOCA5	—
RA6	14	31	29	33	ANA6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	IOCA6	OSC2 CLKOUT
RA7	13	30	28	32	ANA7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	IOCA7	OSC1 CLKIN
RB0	33	8	8	9	ANB0	—	—	C2IN1+	ZCD	—	—	—	—	—	CCP4 ⁽¹⁾	CWG1IN ⁽¹⁾	—	—	—	INT0 ⁽¹⁾ IOCB0	—
RB1	34	9	9	10	ANB1	—	—	C1IN3- C2IN3-	—	SCL2 ^(3,4)	—	—	—	—	—	CWG2IN ⁽¹⁾	—	—	—	INT1 ⁽¹⁾ IOCB1	—
RB2	35	10	10	11	ANB2	—	—	—	—	SDA2 ^(3,4)	—	—	—	—	—	CWG3IN ⁽¹⁾	—	—	—	INT2 ⁽¹⁾ IOCB2	—
RB3	36	11	11	12	ANB3	—	—	C1IN2- C2IN2-	—	—	—	—	—	—	—	—	—	—	—	IOCB3	—
RB4	37	14	12	14	ANB4 ADCACT ⁽¹⁾	—	—	—	—	—	—	—	—	T5G ⁽¹⁾	—	—	—	—	—	IOCB4	—
RB5	38	15	13	15	ANB5	—	—	—	—	—	—	—	—	T1G ⁽¹⁾	CCP3 ⁽¹⁾	—	—	—	—	IOCB5	—
RB6	39	16	14	16	ANB6	—	—	—	—	—	—	CTS2 ⁽¹⁾	—	—	—	—	CLCIN2 ⁽¹⁾	—	—	IOCB6	ICSPCLK
RB7	40	17	15	17	ANB7	—	DAC1OUT2	—	—	—	—	RX2 ⁽¹⁾	—	T6IN ⁽¹⁾	—	—	CLCIN3 ⁽¹⁾	—	—	IOCB7	ICSPDAT
RC0	15	32	30	34	ANC0	—	—	—	—	—	—	—	—	T1CKI ⁽¹⁾ T3CKI ⁽¹⁾ T3G ⁽¹⁾ SMTWIN1 ⁽¹⁾	—	—	—	—	—	IOCC0	SOSCO
RC1	16	35	31	35	ANC1	—	—	—	—	—	—	—	—	SMTSIG1 ⁽¹⁾	CCP2 ⁽¹⁾	—	—	—	—	IOCC1	SOSCI

Note

- 1: This is a PPS remappable input signal. The input function may be moved from the default location shown to one of several other PORTx pins.
- 2: All output signals shown in this row are PPS remappable.
- 3: This is a bidirectional signal. For normal module operation, the firmware should map this signal to the same pin in both the PPS input and PPS output registers.
- 4: These pins are configured for I²C and SMBus 3.0/2.0 logic levels; The SCLx/SDAx signals may be assigned to any of the RB1/RB2/RC3/RC4 pins. PPS assignments to the other pins (e.g., RA5) will operate, but input logic levels will be standard TTL/ST as selected by the INLVL register, instead of the I²C specific or SMBus input buffer thresholds.

TABLE 4: 40/44-PIN ALLOCATION TABLE FOR PIC18(L)F4XK42, PIC18(L)F5XK42 (CONTINUED)

I/O	40-Pin PDIP	44-Pin TQFP	40-Pin UQFN	44-Pin QFN	ADC	Voltage Reference	DAC	Comparators	Zero Cross Detect	I ² C	SPI	UART	DSM	Timers/SMT	CCP and PWM	CWG	CLC	NCO	Clock Reference (CLKR)	Interrupt-on-Change	Basic
RC2	17	36	32	36	ANC2	—	—	—	—	—	—	—	—	T5CKI ⁽¹⁾	CCP1 ⁽¹⁾	—	—	—	—	IOCC2	—
RC3	18	37	33	37	ANC3	—	—	—	—	SCL1 ^(3,4)	SCK1 ⁽¹⁾	—	—	T2IN ⁽¹⁾	—	—	—	—	—	IOCC3	—
RC4	23	42	38	42	ANC4	—	—	—	—	SDA1 ^(3,4)	SDI1 ⁽¹⁾	—	—	—	—	—	—	—	—	IOCC4	—
RC5	24	43	39	43	ANC5	—	—	—	—	—	—	—	—	T4IN ⁽⁴⁾	—	—	—	—	—	IOCC5	—
RC6	25	44	40	44	ANC6	—	—	—	—	—	—	CTS1 ⁽¹⁾	—	—	—	—	—	—	—	IOCC6	—
RC7	26	1	1	1	ANC7	—	—	—	—	—	—	RX1 ⁽¹⁾	—	—	—	—	—	—	—	IOCC7	—
RD0	19	38	34	38	AND0	—	—	—	—	— ⁽⁴⁾	—	—	—	—	—	—	—	—	—	—	—
RD1	20	39	35	39	AND1	—	—	—	—	— ⁽⁴⁾	—	—	—	—	—	—	—	—	—	—	—
RD2	21	40	36	40	AND2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
RD3	22	41	37	41	AND3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
RD4	27	2	2	2	AND4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
RD5	28	3	3	3	AND5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
RD6	29	4	4	4	AND6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
RD7	30	5	5	5	AND7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
RE0	8	25	23	25	ANE0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
RE1	9	26	24	26	ANE1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
RE2	10	27	25	27	ANE2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
RE3	1	18	16	18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	IOCE3	MCLR V _{PP}
VDD	11, 32	7, 28	7, 26	8, 28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
VSS	12, 31	6, 29	6, 27	6, 31, 30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

- Note**
- 1: This is a PPS remappable input signal. The input function may be moved from the default location shown to one of several other PORTx pins.
 - 2: All output signals shown in this row are PPS remappable.
 - 3: This is a bidirectional signal. For normal module operation, the firmware should map this signal to the same pin in both the PPS input and PPS output registers.
 - 4: These pins are configured for I²C and SMBus 3.0/2.0 logic levels; The SCLx/SDAx signals may be assigned to any of the RB1/RB2/RC3/RC4 pins. PPS assignments to the other pins (e.g., RA5) will operate, but input logic levels will be standard TTL/ST as selected by the INLVL register, instead of the I²C specific or SMBus input buffer thresholds.

TABLE 4: 40/44-PIN ALLOCATION TABLE FOR PIC18(L)F4XK42, PIC18(L)F5XK42 (CONTINUED)

I/O	40-Pin PDIP	44-Pin TQFP	40-Pin UQFN	44-Pin QFN	ADC	Voltage Reference	DAC	Comparators	Zero Cross Detect	I ² C	SPI	UART	DSM	Timers/SMT	CCP and PWM	CWG	CLC	NCO	Clock Reference (CLKR)	Interrupt-on-Change	Basic
OUT ⁽²⁾	—	—	—	—	ADGRDA ADGRDB	—	—	C1OUT C2OUT	—	SDA1 SCL1 SDA2 SCL2	SS1 SCK1 SDO1	RTS1 TXDE1 TX1 RTS2 TXDE2 TX2	DSM	TMR0	CCP1 CCP2 CCP3 CCP4 PWM5OUT PWM6OUT PWM7OUT PWM8OUT	CWG1A CWG1B CWG1C CWG1D CWG2A CWG2B CWG2C CWG2D CWG3A CWG3B CWG3C CWG3D	CLC1OUT CLC2OUT CLC3OUT CLC4OUT	NCO	CLKR	—	—

- Note**
- 1: This is a PPS remappable input signal. The input function may be moved from the default location shown to one of several other PORTx pins.
 - 2: All output signals shown in this row are PPS remappable.
 - 3: This is a bidirectional signal. For normal module operation, the firmware should map this signal to the same pin in both the PPS input and PPS output registers.
 - 4: These pins are configured for I²C and SMBus 3.0/2.0 logic levels; The SCLx/SDAx signals may be assigned to any of the RB1/RB2/RC3/RC4 pins. PPS assignments to the other pins (e.g., RA5) will operate, but input logic levels will be standard TTL/ST as selected by the INLVL register, instead of the I²C specific or SMBus input buffer thresholds.

TABLE 5: 48-PIN ALLOCATION TABLE FOR PIC18(L)F5XK42

I/O	48-Pin TQFP	48-Pin UQFN	ADC	Voltage Reference	DAC	Comparators	Zero Cross Detect	I ² C	SPI	UART	DSM	Timers/SMT	CCP and PWM	CWG	CLC	NCO	Clock Reference (CLKR)	Interrupt-on-Change	Basic
RA0	21	21	ANA0	—	—	C1IN0- C2IN0-	—	—	—	—	—	—	—	—	CLCIN0 ⁽¹⁾	—	—	IOCA0	—
RA1	22	22	ANA1	—	—	C1IN1- C2IN1-	—	—	—	—	—	—	—	—	CLCIN1 ⁽¹⁾	—	—	IOCA1	—
RA2	23	23	ANA2	VREF-	DAC1OUT1	C1IN0+ C2IN0+	—	—	—	—	—	—	—	—	—	—	—	IOCA2	—
RA3	24	24	ANA3	VREF+	—	C1IN1+	—	—	—	—	MDCARL ⁽¹⁾	—	—	—	—	—	—	IOCA3	—
RA4	25	25	ANA4	—	—	—	—	—	—	—	MDCARH ⁽¹⁾	T0CKI ⁽¹⁾	—	—	—	—	—	IOCA4	—
RA5	26	26	ANA5	—	—	—	—	—	SS1 ⁽¹⁾	—	MDSRC ⁽¹⁾	—	—	—	—	—	—	IOCA5	—
RA6	33	33	ANA6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	IOCA6	OSC2 CLKOUT
RA7	32	32	ANA7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	IOCA7	OSC1 CLKIN
RB0	8	8	ANB0	—	—	C2IN1+	ZCD	—	—	—	—	—	CCP4 ⁽¹⁾	CWG1IN ⁽¹⁾	—	—	—	INT0 ⁽¹⁾ IOCB0	—
RB1	9	9	ANB1	—	—	C1IN3- C2IN3-	—	SCL2 ^(3,4)	—	—	—	—	—	CWG2IN ⁽¹⁾	—	—	—	INT1 ⁽¹⁾ IOCB1	—
RB2	10	10	ANB2	—	—	—	—	SDA2 ^(3,4)	—	—	—	—	—	CWG3IN ⁽¹⁾	—	—	—	INT2 ⁽¹⁾ IOCB2	—
RB3	11	11	ANB3	—	—	C1IN2- C2IN2-	—	—	—	—	—	—	—	—	—	—	—	IOCB3	—
RB4	16	16	ANB4 ADCACT ⁽¹⁾	—	—	—	—	—	—	—	—	T5G ⁽¹⁾	—	—	—	—	—	IOCB4	—
RB5	17	17	ANB5	—	—	—	—	—	—	—	—	T1G ⁽¹⁾	CCP3 ⁽¹⁾	—	—	—	—	IOCB5	—
RB6	18	18	ANB6	—	—	—	—	—	—	CTS2 ⁽¹⁾	—	—	—	—	CLCIN2 ⁽¹⁾	—	—	IOCB6	ICSPCLK
RB7	19	19	ANB7	—	DAC1OUT2	—	—	—	—	RX2 ⁽¹⁾	—	T6IN ⁽¹⁾	—	—	CLCIN3 ⁽¹⁾	—	—	IOCB7	ICSPDAT
RC0	34	34	ANC0	—	—	—	—	—	—	—	—	T1CKI ⁽⁴⁾ T3CKI ⁽⁴⁾ T3G ⁽¹⁾ SMTWIN1 ⁽¹⁾	—	—	—	—	—	IOCC0	SOSCO
RC1	35	35	ANC1	—	—	—	—	—	—	—	—	SMTSIG1 ⁽¹⁾	CCP2 ⁽¹⁾	—	—	—	—	IOCC1	SOSCI

- Note**
- 1: This is a PPS remappable input signal. The input function may be moved from the default location shown to one of several other PORTx pins.
 - 2: All output signals shown in this row are PPS remappable.
 - 3: This is a bidirectional signal. For normal module operation, the firmware should map this signal to the same pin in both the PPS input and PPS output registers.
 - 4: These pins are configured for I²C and SMBus 3.0/2.0 logic levels; The SCLx/SDAx signals may be assigned to any of the RB1/RB2/RC3/RC4 pins. PPS assignments to the other pins (e.g., RA5) will operate, but input logic levels will be standard TTL/ST as selected by the INLVL register, instead of the I²C specific or SMBus input buffer thresholds.

TABLE 5: 48-PIN ALLOCATION TABLE FOR PIC18(L)F5XK42 (CONTINUED)

I/O	48-Pin TQFP	48-Pin UQFN	ADC	Voltage Reference	DAC	Comparators	Zero Cross Detect	I ² C	SPI	UART	DSM	Timers/SMT	CCP and PWM	CWG	CLC	NCO	Clock Reference (CLKR)	Interrupt-on-Change	Basic
RC2	40	40	ANC2	—	—	—	—	—	—	—	—	T5CK1 ⁽¹⁾	CCP1 ⁽¹⁾	—	—	—	—	IOCC2	—
RC3	41	41	ANC3	—	—	—	—	SCL1 ^(3,4)	SCK1 ⁽¹⁾	—	—	T2IN ⁽¹⁾	—	—	—	—	—	IOCC3	—
RC4	46	46	ANC4	—	—	—	—	SDA1 ^(3,4)	SDI1 ⁽¹⁾	—	—	—	—	—	—	—	—	IOCC4	—
RC5	47	47	ANC5	—	—	—	—	—	—	—	—	T4IN ⁽¹⁾	—	—	—	—	—	IOCC5	—
RC6	48	48	ANC6	—	—	—	—	—	—	CTS1 ⁽¹⁾	—	—	—	—	—	—	—	IOCC6	—
RC7	1	1	ANC7	—	—	—	—	—	—	RX1 ⁽¹⁾	—	—	—	—	—	—	—	IOCC7	—
RD0	42	42	AND0	—	—	—	—	— ⁽⁴⁾	—	—	—	—	—	—	—	—	—	—	—
RD1	43	43	AND1	—	—	—	—	— ⁽⁴⁾	—	—	—	—	—	—	—	—	—	—	—
RD2	44	44	AND2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
RD3	45	45	AND3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
RD4	2	2	AND4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
RD5	3	3	AND5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
RD6	4	4	AND6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
RD7	5	5	AND7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
RE0	27	27	ANE0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
RE1	28	28	ANE1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
RE2	29	29	ANE2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
RE3	20	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	IOCE3	MCLR V _{PP}
RF0	36	36	ANF0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
RF1	37	37	ANF1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
RF2	38	38	ANF2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
RF3	39	39	ANF3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
RF4	12	12	ANF4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
RF5	13	13	ANF5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
RF6	14	14	ANF6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
RF7	15	15	ANF7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
V _{DD}	7, 30	7, 30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

- Note**
- 1: This is a PPS remappable input signal. The input function may be moved from the default location shown to one of several other PORTx pins.
 - 2: All output signals shown in this row are PPS remappable.
 - 3: This is a bidirectional signal. For normal module operation, the firmware should map this signal to the same pin in both the PPS input and PPS output registers.
 - 4: These pins are configured for I²C and SMBus 3.0/2.0 logic levels; The SCLx/SDAx signals may be assigned to any of the RB1/RB2/RC3/RC4 pins. PPS assignments to the other pins (e.g., RA5) will operate, but input logic levels will be standard TTL/ST as selected by the INLVL register, instead of the I²C specific or SMBus input buffer thresholds.

TABLE 5: 48-PIN ALLOCATION TABLE FOR PIC18(L)F5XK42 (CONTINUED)

I/O	48-Pin TQFP	48-Pin UQFN	ADC	Voltage Reference	DAC	Comparators	Zero Cross Detect	I ² C	SPI	UART	DSM	Timers/SMT	CCP and PWM	CWG	CLC	NCO	Clock Reference (CLKR)	Interrupt-on-Change	Basic
VSS	6, 31	6, 31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
OUT ⁽²⁾	—	—	ADGRDA ADGRDB	—	—	C1OUT C2OUT	—	SDA1 SCL1 SDA2 SCL2	SS1 SCK1 SDO1	RTS1 TXDE1 TX1 RTS2 TXDE2 TX2	DSM	TMR0	CCP1 CCP2 CCP3 CCP4 PWM5OUT PWM6OUT PWM7OUT PWM8OUT	CWG1A CWG1B CWG1C CWG1D CWG2A CWG2B CWG2C CWG2D CWG3A CWG3B CWG3C CWG3D	CLC1OUT CLC2OUT CLC3OUT CLC4OUT	NCO	CLKR	—	—

- Note**
- 1: This is a PPS remappable input signal. The input function may be moved from the default location shown to one of several other PORTx pins.
 - 2: All output signals shown in this row are PPS remappable.
 - 3: This is a bidirectional signal. For normal module operation, the firmware should map this signal to the same pin in both the PPS input and PPS output registers.
 - 4: These pins are configured for I²C and SMBus 3.0/2.0 logic levels; The SCLx/SDAx signals may be assigned to any of the RB1/RB2/RC3/RC4 pins. PPS assignments to the other pins (e.g., RA5) will operate, but input logic levels will be standard TTL/ST as selected by the INLVL register, instead of the I²C specific or SMBus input buffer thresholds.

Note the following details of the code protection feature on Microchip devices:

- Microchip products meet the specification contained in their particular Microchip Data Sheet.
- Microchip believes that its family of products is one of the most secure families of its kind on the market today, when used in the intended manner and under normal conditions.
- There are dishonest and possibly illegal methods used to breach the code protection feature. All of these methods, to our knowledge, require using the Microchip products in a manner outside the operating specifications contained in Microchip's Data Sheets. Most likely, the person doing so is engaged in theft of intellectual property.
- Microchip is willing to work with the customer who is concerned about the integrity of their code.
- Neither Microchip nor any other semiconductor manufacturer can guarantee the security of their code. Code protection does not mean that we are guaranteeing the product as "unbreakable."

Code protection is constantly evolving. We at Microchip are committed to continuously improving the code protection features of our products. Attempts to break Microchip's code protection feature may be a violation of the Digital Millennium Copyright Act. If such acts allow unauthorized access to your software or other copyrighted work, you may have a right to sue for relief under that Act.

Information contained in this publication regarding device applications and the like is provided only for your convenience and may be superseded by updates. It is your responsibility to ensure that your application meets with your specifications. MICROCHIP MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY KIND WHETHER EXPRESS OR IMPLIED, WRITTEN OR ORAL, STATUTORY OR OTHERWISE, RELATED TO THE INFORMATION, INCLUDING BUT NOT LIMITED TO ITS CONDITION, QUALITY, PERFORMANCE, MERCHANTABILITY OR FITNESS FOR PURPOSE. Microchip disclaims all liability arising from this information and its use. Use of Microchip devices in life support and/or safety applications is entirely at the buyer's risk, and the buyer agrees to defend, indemnify and hold harmless Microchip from any and all damages, claims, suits, or expenses resulting from such use. No licenses are conveyed, implicitly or otherwise, under any Microchip intellectual property rights unless otherwise stated.

Microchip received ISO/TS-16949:2009 certification for its worldwide headquarters, design and wafer fabrication facilities in Chandler and Tempe, Arizona; Gresham, Oregon and design centers in California and India. The Company's quality system processes and procedures are for its PIC® MCUs and dsPIC® DSCs, KEELOQ® code hopping devices, Serial EEPROMs, microperipherals, nonvolatile memory and analog products. In addition, Microchip's quality system for the design and manufacture of development systems is ISO 9001:2000 certified.

QUALITY MANAGEMENT SYSTEM
CERTIFIED BY DNV
== ISO/TS 16949 ==

Trademarks

The Microchip name and logo, the Microchip logo, AnyRate, AVR, AVR logo, AVR Freaks, BeaconThings, BitCloud, CryptoMemory, CryptoRF, dsPIC, FlashFlex, flexPWR, Helder, JukeBlox, KEELOQ, KEELOQ logo, Klear, LANCheck, LINK MD, maxStylus, maxTouch, MediaLB, megaAVR, MOST, MOST logo, MPLAB, OptoLyzer, PIC, picoPower, PICSTART, PIC32 logo, Prochip Designer, QTouch, RightTouch, SAM-BA, SpyNIC, SST, SST Logo, SuperFlash, tinyAVR, UNI/O, and XMEGA are registered trademarks of Microchip Technology Incorporated in the U.S.A. and other countries.

ClockWorks, The Embedded Control Solutions Company, EtherSynch, Hyper Speed Control, HyperLight Load, IntelliMOS, mTouch, Precision Edge, and Quiet-Wire are registered trademarks of Microchip Technology Incorporated in the U.S.A.

Adjacent Key Suppression, AKS, Analog-for-the-Digital Age, Any Capacitor, AnyIn, AnyOut, BodyCom, chipKIT, chipKIT logo, CodeGuard, CryptoAuthentication, CryptoCompanion, CryptoController, dsPICDEM, dsPICDEM.net, Dynamic Average Matching, DAM, ECAN, EtherGREEN, In-Circuit Serial Programming, ICSP, Inter-Chip Connectivity, JitterBlocker, KlearNet, KlearNet logo, Mindi, MiWi, motorBench, MPASM, MPF, MPLAB Certified logo, MPLIB, MPLINK, MultiTRAK, NetDetach, Omniscient Code Generation, PICDEM, PICDEM.net, PICKit, PICtail, PureSilicon, QMatrix, RightTouch logo, REAL ICE, Ripple Blocker, SAM-ICE, Serial Quad I/O, SMART-I.S., SQI, SuperSwitcher, SuperSwitcher II, Total Endurance, TSHARC, USBCheck, VariSense, ViewSpan, WiperLock, Wireless DNA, and ZENA are trademarks of Microchip Technology Incorporated in the U.S.A. and other countries.

SQTP is a service mark of Microchip Technology Incorporated in the U.S.A.

Silicon Storage Technology is a registered trademark of Microchip Technology Inc. in other countries.

GestIC is a registered trademark of Microchip Technology Germany II GmbH & Co. KG, a subsidiary of Microchip Technology Inc., in other countries.

All other trademarks mentioned herein are property of their respective companies.

© 2016, Microchip Technology Incorporated, All Rights Reserved.
ISBN: 978-1-5224-1158-1

Worldwide Sales and Service

AMERICAS

Corporate Office
 2355 West Chandler Blvd.
 Chandler, AZ 85224-6199
 Tel: 480-792-7200
 Fax: 480-792-7277
 Technical Support:
<http://www.microchip.com/support>
 Web Address:
www.microchip.com

Atlanta
 Duluth, GA
 Tel: 678-957-9614
 Fax: 678-957-1455

Austin, TX
 Tel: 512-257-3370

Boston
 Westborough, MA
 Tel: 774-760-0087
 Fax: 774-760-0088

Chicago
 Itasca, IL
 Tel: 630-285-0071
 Fax: 630-285-0075

Dallas
 Addison, TX
 Tel: 972-818-7423
 Fax: 972-818-2924

Detroit
 Novi, MI
 Tel: 248-848-4000

Houston, TX
 Tel: 281-894-5983

Indianapolis
 Noblesville, IN
 Tel: 317-773-8323
 Fax: 317-773-5453
 Tel: 317-536-2380

Los Angeles
 Mission Viejo, CA
 Tel: 949-462-9523
 Fax: 949-462-9608
 Tel: 951-273-7800

Raleigh, NC
 Tel: 919-844-7510

New York, NY
 Tel: 631-435-6000

San Jose, CA
 Tel: 408-735-9110
 Tel: 408-436-4270

Canada - Toronto
 Tel: 905-695-1980
 Fax: 905-695-2078

ASIA/PACIFIC

Asia Pacific Office
 Suites 3707-14, 37th Floor
 Tower 6, The Gateway
 Harbour City, Kowloon

Hong Kong
 Tel: 852-2943-5100
 Fax: 852-2401-3431

Australia - Sydney
 Tel: 61-2-9868-6733
 Fax: 61-2-9868-6755

China - Beijing
 Tel: 86-10-8569-7000
 Fax: 86-10-8528-2104

China - Chengdu
 Tel: 86-28-8665-5511
 Fax: 86-28-8665-7889

China - Chongqing
 Tel: 86-23-8980-9588
 Fax: 86-23-8980-9500

China - Dongguan
 Tel: 86-769-8702-9880

China - Guangzhou
 Tel: 86-20-8755-8029

China - Hangzhou
 Tel: 86-571-8792-8115
 Fax: 86-571-8792-8116

China - Hong Kong SAR
 Tel: 852-2943-5100
 Fax: 852-2401-3431

China - Nanjing
 Tel: 86-25-8473-2460
 Fax: 86-25-8473-2470

China - Qingdao
 Tel: 86-532-8502-7355
 Fax: 86-532-8502-7205

China - Shanghai
 Tel: 86-21-3326-8000
 Fax: 86-21-3326-8021

China - Shenyang
 Tel: 86-24-2334-2829
 Fax: 86-24-2334-2393

China - Shenzhen
 Tel: 86-755-8864-2200
 Fax: 86-755-8203-1760

China - Wuhan
 Tel: 86-27-5980-5300
 Fax: 86-27-5980-5118

China - Xian
 Tel: 86-29-8833-7252
 Fax: 86-29-8833-7256

ASIA/PACIFIC

China - Xiamen
 Tel: 86-592-2388138
 Fax: 86-592-2388130

China - Zhuhai
 Tel: 86-756-3210040
 Fax: 86-756-3210049

India - Bangalore
 Tel: 91-80-3090-4444
 Fax: 91-80-3090-4123

India - New Delhi
 Tel: 91-11-4160-8631
 Fax: 91-11-4160-8632

India - Pune
 Tel: 91-20-3019-1500

Japan - Osaka
 Tel: 81-6-6152-7160
 Fax: 81-6-6152-9310

Japan - Tokyo
 Tel: 81-3-6880-3770
 Fax: 81-3-6880-3771

Korea - Daegu
 Tel: 82-53-744-4301
 Fax: 82-53-744-4302

Korea - Seoul
 Tel: 82-2-554-7200
 Fax: 82-2-558-5932 or
 82-2-558-5934

Malaysia - Kuala Lumpur
 Tel: 60-3-6201-9857
 Fax: 60-3-6201-9859

Malaysia - Penang
 Tel: 60-4-227-8870
 Fax: 60-4-227-4068

Philippines - Manila
 Tel: 63-2-634-9065
 Fax: 63-2-634-9069

Singapore
 Tel: 65-6334-8870
 Fax: 65-6334-8850

Taiwan - Hsin Chu
 Tel: 886-3-5778-366
 Fax: 886-3-5770-955

Taiwan - Kaohsiung
 Tel: 886-7-213-7830

Taiwan - Taipei
 Tel: 886-2-2508-8600
 Fax: 886-2-2508-0102

Thailand - Bangkok
 Tel: 66-2-694-1351
 Fax: 66-2-694-1350

EUROPE

Austria - Wels
 Tel: 43-7242-2244-39
 Fax: 43-7242-2244-393

Denmark - Copenhagen
 Tel: 45-4450-2828
 Fax: 45-4485-2829

Finland - Espoo
 Tel: 358-9-4520-820

France - Paris
 Tel: 33-1-69-53-63-20
 Fax: 33-1-69-30-90-79

France - Saint Cloud
 Tel: 33-1-30-60-70-00

Germany - Garching
 Tel: 49-8931-9700

Germany - Haan
 Tel: 49-2129-3766400

Germany - Heilbronn
 Tel: 49-7131-67-3636

Germany - Karlsruhe
 Tel: 49-721-625370

Germany - Munich
 Tel: 49-89-627-144-0
 Fax: 49-89-627-144-44

Germany - Rosenheim
 Tel: 49-8031-354-560

Israel - Ra'anana
 Tel: 972-9-744-7705

Italy - Milan
 Tel: 39-0331-742611
 Fax: 39-0331-466781

Italy - Padova
 Tel: 39-049-7625286

Netherlands - Drunen
 Tel: 31-416-690399
 Fax: 31-416-690340

Norway - Trondheim
 Tel: 47-7289-7561

Poland - Warsaw
 Tel: 48-22-3325737

Romania - Bucharest
 Tel: 40-21-407-87-50

Spain - Madrid
 Tel: 34-91-708-08-90
 Fax: 34-91-708-08-91

Sweden - Gothenberg
 Tel: 46-31-704-60-40

Sweden - Stockholm
 Tel: 46-8-5090-4654

UK - Wokingham
 Tel: 44-118-921-5800
 Fax: 44-118-921-5820

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Microchip:

[PIC18F24K42-I/ML](#) [PIC18F25K42-E/ML](#) [PIC18F25K42-I/SP](#) [PIC18F24K42-E/SS](#) [PIC18LF24K42-E/SP](#)
[PIC18LF24K42-E/SO](#) [PIC18LF24K42-I/SS](#) [PIC18LF25K42-I/MV](#) [PIC18F25K42-I/MV](#) [PIC18F24K42T-I/SO](#)
[PIC18F25K42-I/SS](#) [PIC18F25K42T-I/MV](#) [PIC18LF24K42-E/SS](#) [PIC18LF25K42-I/SP](#) [PIC18F24K42T-I/ML](#)
[PIC18LF25K42T-I/SS](#) [PIC18LF24K42T-I/MV](#) [PIC18LF25K42-E/ML](#) [PIC18LF25K42-I/ML](#) [PIC18LF25K42T-I/MV](#)
[PIC18F25K42-E/SO](#) [PIC18F25K42T-I/SS](#) [PIC18LF25K42-I/SO](#) [PIC18F24K42T-I/MV](#) [PIC18F25K42-E/MV](#)
[PIC18F24K42-E/SP](#) [PIC18LF24K42-E/ML](#) [PIC18LF25K42-E/SO](#) [PIC18F24K42-I/SO](#) [PIC18LF24K42-I/ML](#)
[PIC18LF24K42-I/SO](#) [PIC18LF24K42T-I/ML](#) [PIC18F25K42T-I/SO](#) [PIC18LF24K42-I/SP](#) [PIC18LF24K42T-I/SO](#)
[PIC18LF25K42-I/SS](#) [PIC18F24K42-I/SS](#) [PIC18LF24K42-I/MV](#) [PIC18F24K42-I/MV](#) [PIC18F25K42-E/SP](#)
[PIC18F25K42-I/ML](#) [PIC18F25K42-E/SS](#) [PIC18F24K42T-I/SS](#) [PIC18F24K42-E/SO](#) [PIC18F24K42-E/MV](#)
[PIC18F25K42-I/SO](#) [PIC18LF24K42T-I/SS](#) [PIC18LF25K42T-I/ML](#) [PIC18LF24K42-E/MV](#) [PIC18F24K42-I/SP](#)
[PIC18F24K42-E/ML](#) [PIC18F25K42T-I/ML](#) [PIC18LF25K42-E/SS](#) [PIC18LF25K42-E/MV](#) [PIC18LF25K42-E/SP](#)
[PIC18LF25K42T-I/SO](#) [PIC18F25K42-E/SSVAO](#) [PIC18F25K42T-E/SSVAO](#) [PIC18F24K42-E/SSVAO](#) [PIC18F24K42T-E/SSVAO](#)

Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкурентоспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



Тел: +7 (812) 336 43 04 (многоканальный)

Email: org@lifeelectronics.ru

www.lifeelectronics.ru