

Appendix B

Electrical characteristics

Absolute maximum ratings: (16F818/9)

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Ambient temperature -55°C to $+125^{\circ}\text{C}$

Storage temperature -65°C to $+150^{\circ}\text{C}$

Voltage on any pin with respect to V_{ss}
(except V_{dd} and MCLR) -0.6V to $V_{dd} + 0.6\text{V}$

Voltage on V_{dd} with respect to V_{ss} 0 to $+7.5\text{V}$

Voltage on MCLR with respect to V_{ss} 0 to $+14\text{V}$

Total power dissipation 1W

Max. current out of V_{ss} pin 200mA

Max. current into V_{dd} pin (16C54) 50mA

Max. current into V_{dd} pin 200mA

Max. output current sunk by any I/O pin 25mA

Max. output current sourced by any I/O pin 25mA

Max. output current sourced by PORTA 100mA

Max. output current sourced by PORTB 100mA

Max. output current sunk by PORTA 100mA

Max. output current sunk by PORTB 100mA

DC Characteristics.

PIC12F629/675

Characteristic	Symbol	Min.	Typ.	Max.	Units	Conditions.
Supply Voltage	Vdd	2.0 2.2 3.0		5.5 5.5 5.5	V V V	Fosc = DC to 4MHz With A/D off PIC12F675 with A/D on Fosc = 4 to 10MHz
RAM data retention voltage	Vdr	1.5			V	Device in Sleep Mode
Supply Current	Idd		0.4 0.9 5.2 20	2 4 15 48	mA mA mA μA	Fosc = 4MHz, Vdd = 2V Fosc = 4MHz, Vdd = 5.5V Fosc = 20MHz, Vdd = 5.5V Fosc = 32KHz, Vdd = 2V, WDT disabled.
Power down Current (sleep mode)	Ipd		1 0.9	18	μA μA	Vdd = 2.0V, A/Don Vdd = 2.0V, WDT disabled

PIC16F818/9

Characteristic	Symbol	Min.	Typ.	Max.	Units	Conditions.
Supply Voltage	Vdd	2.0		5.5	V	HS, XT, RC and LP osc modes
RAM data retention voltage	Vdr	1.5			V	Device in Sleep Mode
Supply Current	Idd		28 874		μA μA	Fosc = 32KHz, Vdd = 5.0V Fosc = 4MHz, Vdd = 5.0V
Power down Current (sleep)	Ipd		0.5		μA	Vdd = 5.0V

PIC16F84

Characteristic	Symbol	Min.	Typ.	Max.	Units	Conditions.
Supply Voltage	Vdd					
PIC16F84-XT		4.0		6.0	V	
PIC16F84-RC		4.0		6.0	V	
PIC16F84-HS		4.5		5.5	V	
PIC16F84-LP		4.0		6.0	V	
RAM data retention voltage	Vdr	1.5			V	Device in Sleep Mode
Supply Current	Idd					
PIC16F84-XT			7.3	10	mA	Fosc = 4MHz, Vdd = 5.5V
PIC16F84-RC			7.3	10	mA	Fosc = 4MHz, Vdd = 5.5V
PIC16F84-HS			5	10	mA	Fosc = 10MHz, Vdd = 5.5V
PIC16F84-LP			35	400	μA	Fosc = 32KHz, Vdd = 3.0V, WDT disabled.
Power down Current (sleep mode)	Ipd		40 38	100 100	μA μA	Vdd = 4.0V, WDT enabled Vdd = 4.0V, WDT disabled

PIC16F87X

Characteristic	Symbol	Min.	Typ.	Max.	Units	Conditions.
Supply Voltage	Vdd	4.0 4.5		5.5 5.5	V V	LP, XT, RC osc configuration HS osc configuration
RAM data retention voltage	Vdr	1.5			V	Device in Sleep Mode
Supply Current	Idd		1.6 7 20	4 15 35	mA mA μA	Fosc = 4MHz, Vdd = 5.5V Fosc = 20MHz, Vdd = 5.5V Fosc = 32KHz, Vdd = 3.0V, WDT disabled.
Power down Current (sleep)	Ipd		1.5	19	μA	Vdd = 4.0V, WDT enabled