





# C8051F023

## Mixed-Signal 64KB ISP FLASH MCU

PRELIMINARY

**SELECTED ELECTRICAL SPECIFICATIONS** TA = -40°C to +85°C unless otherwise specified.

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
<b>GLOBAL CHARACTERISTICS</b>					
Digital Supply Voltage		2.7		3.6	V
Digital Supply Current with CPU active (VDD=2.7V)	Clock=25MHz Clock=1MHz Clock=32kHz; VDD Monitor Disabled		10 0.8 20		mA mA μA
Digital Supply Current (shutdown)	Oscillator not running; VDD Monitor Enabled Oscillator not running; VDD Monitor Disabled		10 0.1		μA μA
Digital Supply RAM Data Retention Voltage			1.5		V
<b>CPU &amp; DIGITAL I/O PORTS</b>					
Clock Frequency Range		DC		25	MHz
Port Output High Voltage	I <sub>OH</sub> = -3mA, Port I/O push-pull	VDD - 0.7			V
Port Output Low Voltage	I <sub>OL</sub> = 8.5mA			0.6	V
Input High Voltage		0.7 x VDD			V
Input Low Voltage				0.3 x VDD	V
<b>A/D CONVERTER</b>					
Resolution			10		bits
Integral Nonlinearity				± 1	LSB
Differential Nonlinearity	Guaranteed Monotonic			± 1	LSB
Signal-to-Noise Plus Distortion		59			dB
Throughput Rate				100	ksps
Input Voltage Range		0		VREF	V
<b>COMPARATORS</b>					
Response Time	CP+ - CP-  = 100mV		4		μs
Input Voltage Range		-0.25		VDD + 0.25	V
Input Bias Current		-5	0.001	+5	nA
Input Offset Voltage		-10		+10	mV

