

TM58P20 DC & AC characteristics compare

Tenx1 : TM58P20 test value (max.)
 Tenx2 : TM58P20 Spec. value
 PIC : Microchip PIC16C57 (industrial)
 Elan : EM78P257
 Myson : MTU8B57E
 Sonix : SN8P1603
 MDT : MDT10P23
 Holtek : HT48R30A-1

1. Current

Current	VDD	Tenx1	Tenx2	Elan	Myson	Holtek	MDT	Sonix	PIC	UNIT	Conditions
I _{dd}	5V	0.4	1	1		2	1	15		uA	Sleep mode
	3V		1	1	9	1	1	6	12	uA	Watchdog off
I _{wdt}	5V	8.9	10	5		10	17	40		uA	Sleep mode
	3V				12	5	3	30	14	uA	Watchdog on
I _{op32a}	5V	25.3	30		1.77m		30			uA	32Khz operation
	3V	6.9	10	30	604			90	40	uA	current & WDT off
I _{op32b}	5V	35.8								uA	32Khz operation
	3V	8.8		35						uA	current & WDT on
I _{op4}	5V	0.88	1	4	2.22	5	0.82	8.5	3.3	mA	4Mhz operation
	3V	0.37			0.58	2	0.35	3		mA	current
I _{op8}	5V					8				mA	8Mhz operation
	3V								10	mA	current
I _{op10}	5V	1.7					1.6			mA	10Mhz operation
	3V	0.78					0.65		10	mA	current
I _{op12}	5V	2.31			4.39					mA	12Mhz operation
	3V	0.95			1.76					mA	current
I _{op16}	5V	2.48								mA	16Mhz operation
	3V	1.18								mA	current
I _{op20}	5V	3.15					3		20	mA	20Mhz operation
	3V	1.53					1.37			mA	current
I _{op24}	5V	3.47			5.84					mA	24Mhz operation
	3V	1.71			1.88					mA	current
I _{ldt2}	3	0.6	1.5							uA	Detect Voltage=2V
	5	2.9	3	5				180		uA	Detect Voltage=2V
I _{ldt4}	5	2.5	3	5				180		uA	Detect Voltage=4V

2. Voltage

Voltage	VDD	Tenx1	Tenx2	Elan	Myson	Holtek	MDT	Sonix	PIC	Unit	Conditions
Vreg32		1.8~ 7.0	2.5~ 5.5		2.1~ 6.4		2.1~ 6.4		2.5~ 6.25	V	32Khz operation
Vreg4		1.8~ 7.0	2.5~ 5.5		2.1~ 6.4	3.3~ 5.5	2.1~ 6.4		3.0~ 6.25	V	4Mhz operation
Vreg8		1.9~ 7.0	2.5~ 5.5	2.3~ 6.5		4.5~ 5.5				V	8Mhz operation
Vreg10		2.0~ 7.0	2.5~ 5.5		2.4~ 6.4		2.4~ 6.4			V	10Mhz operation
Vreg16		2.3~ 7.0	3.0~ 5.5	3.0~ 6.5						V	16Mhz operation
Vreg20		2.7~ 7.0	3.0~ 5.5						4.5~ 5.5	V	20Mhz operation
Vreg24		2.8~ 7.0	3.0~ 5.5		3.0~ 6.4		3~ 6.4			V	24Mhz operation
Vreg40		3.3~ 7.0	4.5~ 5.5	5.0~ 6.5						V	40Mhz operation
Vldt2	3	2.1~2.2 2.0~2.1	2.2 2.2	1.9~ 2.1		2.7~ 3.3		2.4~ 2.8	4.0 or No	V	Detect voltage=2V L ->H H ->L
Vldt4	5	4.0~4.1 3.9~4.1	4 4							V	Detect voltage=4V L ->H H ->L

