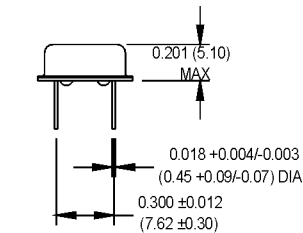
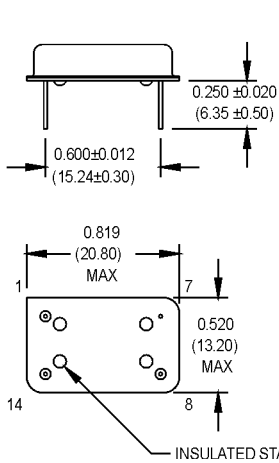


MA Series

14 pin DIP, 5.0 Volt, AC MOS/TTL, Clock Oscillator



All dimensions in inches (mm).

INSULATED STANDOFFS

Pin Connections

PIN	FUNCTION
1	N/C or Tristate
7	Circuit/Case Ground
8	Output
14	+Vdd

Ordering Information

Product Series	Temperature Range	Stability	Output Type	Symmetry/Logic Compatibility	Package/Lead Configurations	RoHS Compliance	Frequency (customer specified)
MA	1	3	F	A	D	-R	00.0000 MHz
1: 0°C to +70°C 2: -40°C to +85°C		1: ±1000 ppm 2: ±500 ppm		A: 40/60 AC MOS/TTL B: 45/55 TTL		Blank: non-RoHS compliant part	
6: -20°C to +70°C 7: 0°C to +85°C		3: ±100 ppm 4: ±50 ppm		C: 45/55 AC MOS		-R: RoHS compliant part	
		5: ±35 ppm 6: ±25 ppm		A: DIP; Gold Flash Header D: DIP; Nickel Header			
		*8: ±20 ppm		G: Gull Wing; Nickel Header X: Gull Wing; Gold Header			

* Contact factory for availability.

	PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition	
Electrical Specifications	Frequency Range	F	30		133	MHz		
	Frequency Stability	$\Delta F/F$	(See Ordering Information)					
	Operating Temperature	T _A	(See Ordering Information)					
	Storage Temperature	T _s	-55		+125	°C		
	Input Voltage	V _{dd}	4.75	5.0	5.25	V		
	Input Current	I _{dd}		70	90	mA	@ 50 Ω Load	
	Symmetry (Duty Cycle)		(See Ordering Information)					See Note 1
	Load				50	Ω	See Note 2	
	Rise/Fall Time	T _r /T _f			2	ns	See Note 3	
	Logic "1" Level	V _{oh}	90% V _{dd}			V	AC MOS Load	
			V _{dd} - 0.5			V	TTL Load	
	Logic "0" Level	V _{ol}			10% V _{dd}	V	AC MOS Load	
					2.4	V	TTL Load	
	Cycle to Cycle Jitter			5	15	ps RMS	1 Sigma	
Tri-State Function		Input Logic "1" or floating; output active Input Logic "0"; output to high-Z						
Environmental	Mechanical Shock	Per MIL-STD-202, Method 213, Condition C						
	Vibration	Per MIL-STD-202, Method 201 & 204						
	Wave Solder Conditions	See page 147						
	Hermeticity	Per MIL-STD-202, Method 112 (1 x 10 ⁻⁸ atm.cc/s of helium)						
	Solderability	Per EIAJ-STD-002						

1. Symmetry is measured at 1.4 V with TTL load, and at 50% V_{dd} with AC MOS load.
2. See load circuit diagram #6.
3. Rise/Fall times are measured between 0.5 V and 2.4 V with TTL load, and between 10% V_{dd} and 90% V_{dd} with AC MOS load.

MtronPTI reserves the right to make changes to the product(s) and service(s) described herein without notice. No liability is assumed as a result of their use or application.

Please see www.mtronpti.com for our complete offering and detailed datasheets. Contact us for your application specific requirements: MtronPTI 1-800-762-8800.