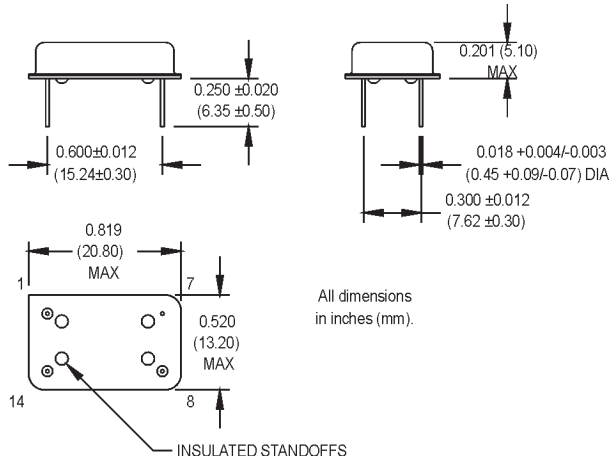


MA Series

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



Ordering Information

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

* Contact factory for availability.

Pin Connections

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

Electrical Specifications	PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition
	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	Tr/Tf			2	ns	See Note 3
	Logic “1” Level	Voh	90% V _{dd}			V	ACMOS Load
			V _{dd} -0.5			V	TTL Load
	Logic “0” Level	Vol			10% V _{dd}	V	ACMOS 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	+260 °C for 10 secs. max.					
	Hermeticity	Per MIL-STD-202, Method 112 (1 x 10 ⁻³ 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.