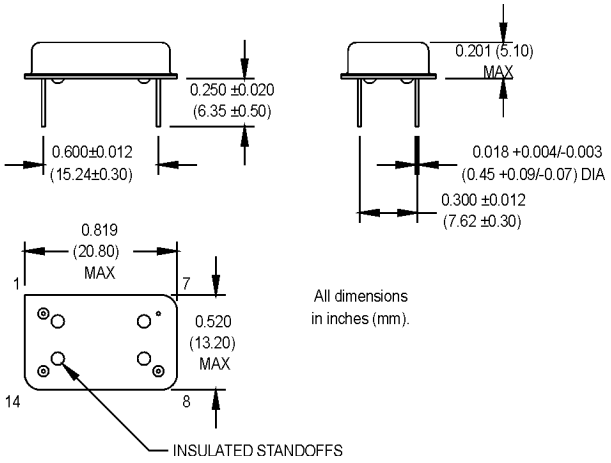
MA Series

14 pin DIP, 5.0 Volt, ACMOS/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 ACMOS/TTL
- **B:** 45/55 TTL
- **C:** 45/55 ACMOS

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

	PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition
Electrical Specifications	Frequency Range	F	30		133	MHz	
	Frequency Stability	ΔF/F	(See Ordering Information)				
	Operating Temperature	TA	(See Ordering Information)				
	Storage Temperature	Ts	-55		+125	°C	
	Input Voltage	Vdd	4.75	5.0	5.25	V	
	Input Current	Idd		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% Vdd Vdd -0.5			V V	ACMOS Load TTL Load
	Logic "0" Level	Vol			10% Vdd 2.4	V V	ACMOS Load 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% Vdd with ACMOS 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% Vdd and 90% Vdd with ACMOS 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.