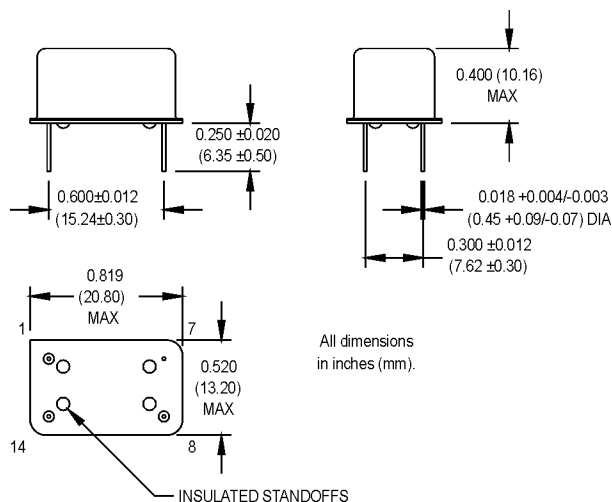


MAX1 Series MAXO Brand Digitally Assisted Temperature Compensated Crystal Oscillators



Ordering Information

Product Series	MAX1	1	P	V	A	D	00.0000 MHz
Temperature Range	1: 0°C to +70°C	2: -40°C to +85°C					
	6: -20°C to +70°C	8: 0°C to +50°C					
Stability	J: ±1 ppm	G: ±0.5 ppm					
	P: ±0.35 ppm	M: ±0.2 ppm					
	N: ±0.1 ppm	W: ±0.05 ppm					
Frequency Control (Pin #1)	V: ±2.5 ppm Typical for 0 VDC to 5.0 VDC						
Symmetry/Logic Compatibility	A: 40/60 CMOS/TTL	B: 45/55 TTL					
	C: 45/55 CMOS						
Package/Lead Configurations	D: DIP; Nickel Header						
Available Frequencies (customer specified)	5.000 MHz	10.000 MHz	19.440 MHz	20.000 MHz			

Pin Connections

PIN	FUNCTION
1	Control Voltage
7	Ground/Case
8	Output
14	+Vdd

Electrical Specifications	PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition	
	Frequency Range	F	(See Ordering Information)					
	Frequency Stability	ΔF/F	(See Ordering Information)					
	Operating Temperature	T _A	(See Ordering Information)					
	Storage Temperature	T _s	-55		+105	°C		
	Input Voltage	V _{dd}	4.75	5.0	5.25	VDC		
	Input Current	I _{dd}						
	5 MHz and 10 MHz				15	mA		
	19.44 MHz and 20 MHz				18	mA		
	Symmetry (Duty Cycle)		(See Ordering Information)					
	Load		5 TTL or 15 pF Max.					
	Rise/Fall Time	Tr/Tf			10	ns		
	Logic “1” Level	V _{oh}	2.4 90			VDC %	TTL HCMOS	
	Logic “0” Level	V _{ol}			10 0.4	VDC %	TTL HCMOS	
	Cycle to Cycle Jitter				5.8	ps RMS	1 Sigma	
	Phase Noise (Typical)	10 Hz -77	100 Hz -107	1 kHz -110	10 kHz -128	100 kHz -145	Offset from carrier dBc/Hz	
	Modulation Bandwidth	f _m	10				kHz	
	Input Impedance (Pin 1)	Z _{in}	75			KΩ		
Control Voltage	V _c	0	2.5	5.0	VDC			
Center Frequency	V _{c0}		2.5		VDC			
Pullability	APR	1	1.5	2	ppm/V			
Deviation Slope						Positive, Monotonic		
Environmental	Mechanical Shock	Per MIL-STD-202, Method 213, Condition C						
	Vibration	Per MIL-STD-202, Method 201 & 204						
	Reflow Solder Conditions	260°C for 10 s max.						
	Hermeticity	Per MIL-STD-202, Method 112 (1 x 10 ⁻⁸ atm.cc/s of helium)						
	Solderability	Per EIAJ-STD-002						

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