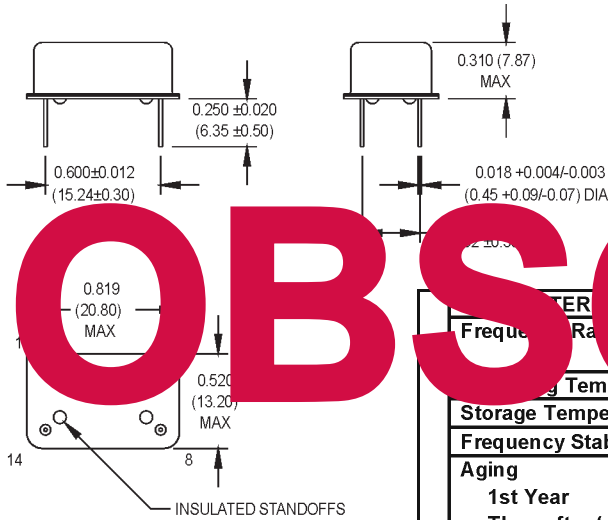


# MTXO Series

## 14 DIP, 5.0 Volt, HCMOS/TTL, TCXO



- Stable TCXO to +/- 1ppm
- Reference timing for SONET, ATM, Instrumentation, and Military Applications



All dimensions in inches (mm).

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

### Ordering Information

Product Series	MTXO	1	H	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	E: ±10 ppm	L: ±5 ppm	H: ±2.5 ppm	K: ±2 ppm	J: ±1 ppm			
Frequency Control (Pin #1)	F: Fixed ("H", "L", and "E" stabilities only)	V: ±5 ppm Min. For 0 VDC to 5.0 VDC						
Symmetry/Logic Compatibility	A: 40/60 CMOS/TTL	B: 45/55 TTL (< 100.000 MHz only)	C: 45/55 CMOS	T: True Sinewave Output				
Package/Lead Configurations	D: DIP; Nickel Header	S: Surf Board						

# OBSOLETE

Parameter	Min.	Typ.	Max.	Units	Condition
Frequency Range	4.5	155.52	33	MHz	CMOS/Sinewave
Operating Temperature (TA)	-55		+125	°C	
Storage Temperature	-55		+125	°C	
Frequency Stability	(See ordering information)				
Aging					
1st Year			1.5	ppm	
Thereafter (per year)			0.5	ppm	
Control Voltage	Vc	0	2.5	5.0	V
Tuning Range				5	ppm/V
Modulation Bandwidth	fm	10			kHz
Input Impedance	Zin	100k			Ω
Supply Voltage	Vdd	4.75	5.0	5.25	V
Supply Current	Idd			30	mA
				45	mA
Output Type					CMOS/TTL/Sinewave
Load				5 TTL or 15 pF Max.	CMOS/TTL
				50 Ohms to ground	Sinewave
Symmetry (Duty Cycle)	(See ordering information)				
Logic "1" Level	Voh	4.5			V
Logic "0" Level	Vol			0.5	V
Output Power	Po	0			dBm
Rise/Fall Time	Tr/Tf			10	ns
0.5 to 30 MHz				5	ns
30.001 to 155.52 MHz					
Start up Time		10			ms
Phase Noise (Typical)	10 Hz	100 Hz	1 kHz	10 kHz	100 kHz
@ 19.44 MHz	-78	-103	-136	-143	-146
@ 155.52 MHz	-42	-66	-76	-80	-89
Offset from carrier					dBc/Hz
Mechanical Shock	Per MIL-STD-202, Method 213, Condition C (100 g's, 6ms duration, ½ sinewave)				
Vibration	Per MIL-STD-202, Method 201 & 204 (10 g's from 10-2000 Hz)				
Hermeticity	Per MIL-STD-202, Method 112 (1x10 <sup>-8</sup> atm. cc/s of Helium)				
Thermal Cycle	Per MIL-STD-883, Method 1010, Condition B (-55°C to +125°C, 15 min dwell, 10 cycles)				
Solderability	Per EIAJ-STD-002				
Max Wave Soldering Conditions	See solder profile, Figure 2				

1. Symmetry is measured at 1.4 V with TTL load; and at 50% Vdd with HCMOS load.
2. Rise/fall times are measured between 0.5 V and 2.4 V with TTL load; and between 10% Vdd and 90% Vdd with HCMOS load. Output levels to +8 dBm are available. Contact factory for non-standard requirements.
3. TTL Load – see load circuit diagram #1. HCMOS Load – see load circuit diagram #2. Sinewave Load – see load circuit diagram #8.

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](http://www.mtronpti.com) for our complete offering and detailed datasheets. Contact us for your application specific requirements: MtronPTI 1-800-762-8800.