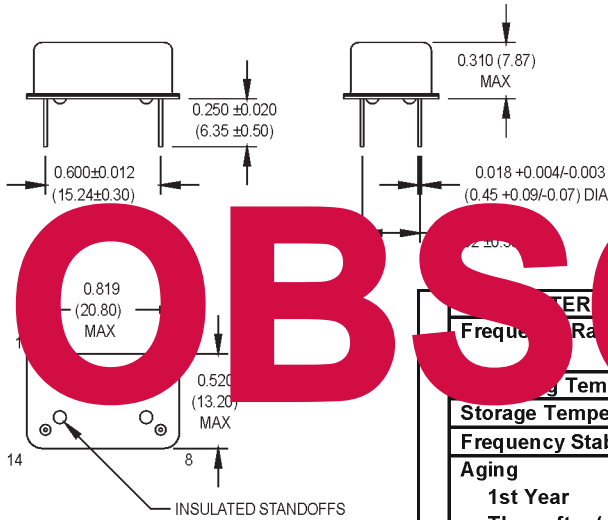# MTXO Series
14 DIP, 5.0 Volt, HCMOS/TTL, TCXO

MtronPTI

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

Ordering Information

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                          MTXO  1  H  V  A  D    00.0000
                                                  MHz
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Product Series

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

frequency (cus...

...6013Sxxx - Co... factory for datasheet.

Dimensions:
- 0.250 ±0.020 (6.35 ±0.50)
- 0.310 (7.87) MAX
- 0.600±0.012 (15.24±0.30)
- 0.018 +0.004/-0.003 (0.45 +0.09/-0.07) DIA
- 0.819 (20.80) MAX
- 0.520 (13.20) MAX

INSULATED STANDOFFS

All dimensions in inches (mm).

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

Electrical Specifications

PARAMETER	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency Range		4.5		155.52	MHz	CMOS/
		10		33	MHz	Sinewave
Operating Temperature	TA	(see ordering information)				
Storage Temperature	Ts	-55		+125	°C	
Frequency Stability	ΔF/F	(See ordering information)				
Aging						
1st Year				1.5	ppm	
Thereafter (per year)				0.5	ppm	
Control Voltage	Vc	0	2.5	5.0	V	Negative Slope
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	0.5 to 70 MHz
				45	mA	70.001 to 155.52 MHz
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)				See Note 1
Logic "1" Level	Voh	4.5			V	CMOS/TTL
Logic "0" Level	Vol			0.5	V	CMOS/TTL
Output Power	Po	0			dBm	
Rise/Fall Time	Tr/Tf					See Note 2
0.5 to 30 MHz				10	ns	
30.001 to 155.52 MHz				5	ns	
Start up Time			10		ms	

Phase Noise (Typical)	10 Hz	100 Hz	1 kHz	10 kHz	100 kHz	Offset from carrier
@ 19.44 MHz	-78	-103	-136	-143	-146	dBc/Hz
@ 155.52 MHz	-42	-66	-76	-80	-89	dBc/Hz

Environmental

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 (1x10-8 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 ands 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 for our complete offering and detailed datasheets. Contact us for your application specific requirements: MtronPTI **1-800-762-8800.**

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