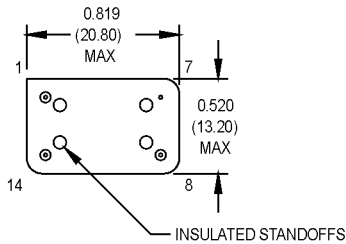
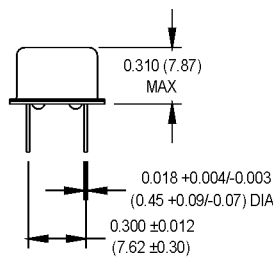
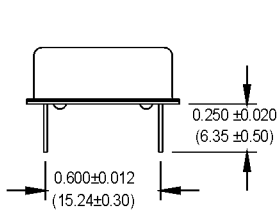


# MTXO Series

## 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).

Ordering Information		00.0000 MHz
<b>Product Series</b>	MTXO	1
<b>Temperature Range</b>	1: 0°C to +70°C	2: -40°C to +85°C
	6: -20°C to +70°C	8: 0°C to +50°C
<b>Stability</b>	E: ±10 ppm	L: ±5 ppm
	K: ±2 ppm	J: ±1 ppm
<b>Frequency Control (Pin #1)</b>	F: Fixed ("H", "L", and "E" stabilities only)	V: ±5 ppm Min. For 0 VDC to 5.0 VDC
<b>Symmetry/Logic Compatibility</b>	A: 40/60 CMOS/TTL	B: 45/55 TTL (< 100.000 MHz only)
	C: 45/55 CMOS	T: True Sinewave Output
<b>Package/Lead Configurations</b>	D: DIP; Nickel Header	S: Surf Board
<b>Frequency (customer specified)</b>		

PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition/Notes
<b>Frequency Range</b>	F	0.5		155.52	MHz	CMOS/TTL
		10		33	MHz	Sinewave
<b>Operating Temperature</b>	T <sub>A</sub>	(See ordering information)				
<b>Storage Temperature</b>	T <sub>s</sub>	-55		+125	°C	
<b>Frequency Stability</b>	ΔF/F	(See ordering information)				
<b>Aging</b>						
1st Year				1.5	ppm	
Thereafter (per year)				0.5	ppm	
<b>Control Voltage</b>	V <sub>c</sub>	0	2.5	5.0	V	Negative Slope
<b>Tuning Range</b>				5	ppm/V	
<b>Modulation Bandwidth</b>	f <sub>m</sub>	10			KHz	
<b>Input Impedance</b>	Z <sub>in</sub>	100k			Ω	
<b>Input Voltage</b>	V <sub>dd</sub>	4.75	5.0	5.25	V	
<b>Input Current</b>	I <sub>dd</sub>			30	mA	0.5 to 70 MHz
				45	mA	70.001 to 155.52 MHz
<b>Output Type</b>						CMOS/TTL/Sinewave
<b>Load</b>		5 TTL or 15 pF Max.				CMOS/TTL
		50 Ohms to ground				Sinewave
<b>Symmetry (Duty Cycle)</b>		(See ordering information)				
		See Note 1				
<b>Logic "1" Level</b>	V <sub>oh</sub>	4.5			V	CMOS/TTL
<b>Logic "0" Level</b>	V <sub>ol</sub>			0.5	V	CMOS/TTL
<b>Output Power</b>	P <sub>o</sub>	0			dBm	
<b>Rise/Fall Time</b>	Tr/Tf					See Note 2
0.5 to 30 MHz				10	ns	
30.001 to 155.52 MHz				5	ns	
<b>Start up Time</b>		10			ms	
<b>Phase Noise (Typical)</b>						Offset from carrier
@ 19.44 MHz	-78	-103	-136	-143	-146	dBc/Hz
@ 155.52 MHz	-42	-66	-76	-80	-89	dBc/Hz

1. Symmetry is measured at 1.4 V with TTL load; and at 50% V<sub>dd</sub> with HCMOS load.
2. Rise/fall times are measured between 0.5 V and 2.4 V with TTL load; and between 10% V<sub>dd</sub> and 90% V<sub>dd</sub> with HCMOS load. Output levels to +8 dBm are available. Contact factory for non-standard requirements.

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