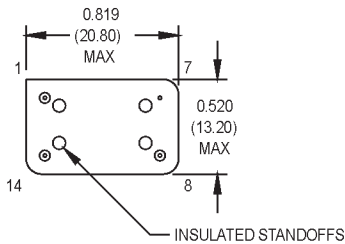
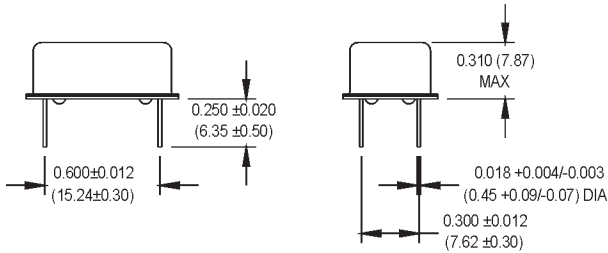


MTXO Series

14 DIP, 5.0 Volt, HCMOS/TTL, TCXO



All dimensions in inches (mm).

* See page 146 for surf board configuration.

Pin Connections

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

Ordering Information

Product Series	Temperature Range	Stability	Frequency Control (Pin #1)	Symmetry/Logic Compatibility	Package/Lead Configurations	Frequency (customer specified)
MTXO	1: 0°C to +70°C 2: -40°C to +85°C 6: -20°C to +70°C 8: 0°C to +50°C	E: ±10 ppm K: ±2 ppm L: ±5 ppm J: ±1 ppm H: ±2.5 ppm	*F: Fixed ("H", "L", and "E" stabilities only) V: ±5 ppm Min. For 0 VDC to 5.0 VDC	A: 40/60 CMOS/TTL C: 45/55 CMOS B: 45/55 TTL (< 100.000 MHz only) T: True Sinewave Output	D: DIP; Nickel Header S: Surf Board	00.0000 MHz

PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition	
Frequency Range	F	0.5 10		155.52 33	MHz MHz	TTL and HCMOS True Sinewave	
Frequency Stability	$\Delta F/F$	(See Ordering Information)					
Operating Temperature	T _A	(See Ordering Information)					
Storage Temperature	T _S	-55		+125	°C		
Input Voltage	V _{dd}	4.75	5.0	5.25	VDC		
Input Current	I _{dd}		15 18 20	25 30 45	mA mA mA	0.5 to 30 MHz 30.00 to 70 MHz 70.001 to 155.52 MHz	
Symmetry ¹		(See Ordering Information)					
Load		5 TTL or 15 pF Max. 50 Ohms				TTL and HCMOS True Sinewave	
Rise/Fall Time ²	Tr/Tf			10 5	ns ns	0.5 to 30 MHz 30.001 to 155.52 MHz	
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				4.2 8.7 5.5	ps RMS ps RMS ps RMS	1 Sigma	
Phase Noise (Typical)		10 Hz	100 Hz	1 kHz	10 kHz	100 kHz	Offset from carrier dBc/Hz dBc/Hz dBc/Hz
Modulation Bandwidth	f _m	10			kHz		
Input Impedance (Pin 1)	Z _{in}	100			KΩ		
Control Voltage	V _c	0	2.5	5.0	VDC		
Center Frequency	V _{c0}		2.5		VDC		
Pullability		1.8	3.2	4.5	ppm/V		
Deviation Slope						Negative, Monotonic	
Mechanical Shock		Per MIL-STD-202, Method 213, Condition C					
Vibration		Per MIL-STD-202, Method 201 & 204					
Reflow 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% V_{dd} with HCMOS load.
2. Rise/fall times are measured between 0.5 V and 2.4 V with TTL load, and between 10% V_{dd} and 90% V_{dd} with HCMOS load. Output levels to +8 dBm are available. Contact factory for non-standard requirements.

M-tron 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. No rights under any patent accompany the sale of such product.

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