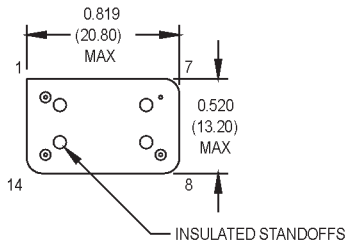
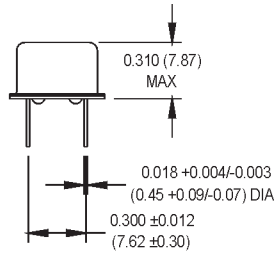
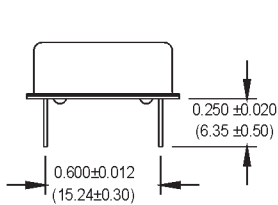


MTXO Series

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

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					
Frequency (customer specified)								

M6013Sxxx - Contact factory for datasheet.

PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition/Notes	
Frequency Range	F	0.5		155.52	MHz	CMOS/TTL	
		10		33	MHz	Sinewave	
Operating Temperature	T _A	(See ordering information)					
Storage Temperature	T _s	-55		+125	°C		
Frequency Stability	ΔF/F	(See ordering information)					
Aging							
1st Year				1.5	ppm		
Thereafter (per year)				0.5	ppm		
Control Voltage	V _c	0	2.5	5.0	V	Negative Slope	
Tuning Range				5	ppm/V		
Modulation Bandwidth	f _m	10			kHz		
Input Impedance	Z _{in}	100k			Ω		
Input Voltage	V _{dd}	4.75	5.0	5.25	V		
Input Current	I _{dd}			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	V _{oh}	4.5			V	CMOS/TTL	
Logic "0" Level	V _{ol}			0.5	V	CMOS/TTL	
Output Power	P _o	0			dBm		
Rise/Fall Time	T _r /T _f					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)						Offset from carrier	
@ 19.44 MHz	-78	-103	-136	-143	-146	dBc/Hz	
@ 155.52 MHz	-42	-66	-76	-80	-89	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 ⁻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						
Soldering Conditions	+240°C max. for 10 secs.						

Electrical Specifications

Environmental

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.
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.