

MTXO Series

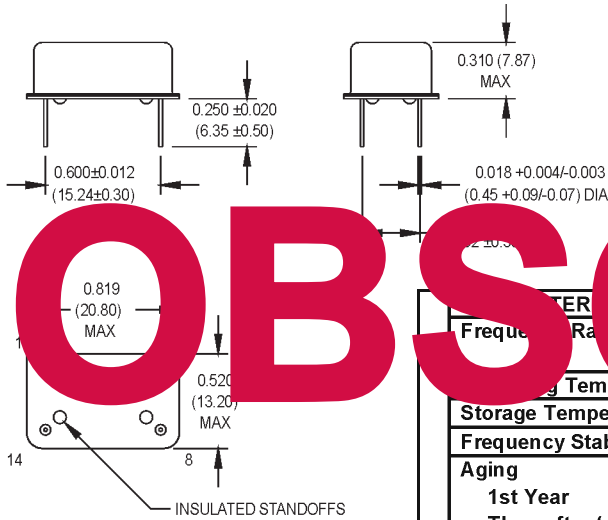
14 DIP, 5.0 Volt, HCMOS/TTL, TCXO



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

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						



All dimensions in inches (mm).

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

OBSOLETE

Parameter	Min.	Typ.	Max.	Units	Condition	
Frequency Range	4.5	155.52	33	MHz	CMOS/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. 50 Ohms to ground				CMOS/TTL 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
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 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.

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