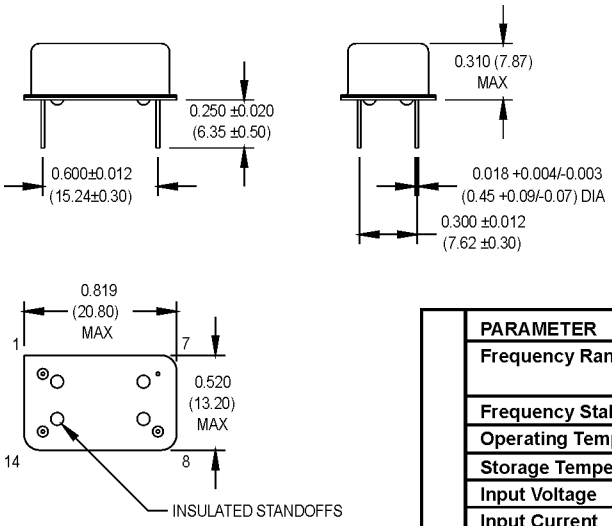
MTXO Series 5.0 Volt TCXO



All dimensions
in inches (mm).

* See page 90 for surf board configuration.

Ordering Information

MTXO 1 H V A D 00.0000 MHz

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 (customer specified)

Pin Connections

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

	PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition
Electrical Specifications	Frequency Range	F	0.5		155.52	MHz	TTL and HCMOS
			10		33	MHz	True Sinewave
	Frequency Stability	ΔF/F	(See Ordering Information)				
	Operating Temperature	TA	(See Ordering Information)				
	Storage Temperature	Ts	-55		+125	°C	
	Input Voltage	Vdd	4.75	5.0	5.25	VDC	
	Input Current	Idd		15	25	mA	0.5 to 30 MHz
				18	30	mA	30.00 to 70 MHz
				20	45	mA	70.001 to 155.52 MHz
	Symmetry [1]		(See Ordering Information)				
	Load		5 TTL or 15 pF Max.				TTL and HCMOS
			50 Ohms				True Sinewave
	Rise/Fall Time [2]	Tr/Tf			10	ns	0.5 to 30 MHz
					5	ns	30.001 to 155.52 MHz
	Logic "1" Level	Voh	2.4			VDC	TTL
			90			%	HCMOS
	Logic "0" Level	Vol			10	VDC	TTL
					0.4	%	HCMOS
	Cycle to Cycle Jitter						1 Sigma
	@ 19.44 MHz				4.2	ps RMS	
	@ 38.88 MHz				8.7	ps RMS	
	@ 155.52 MHz				5.5	ps RMS	
	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
	@ 38.88 MHz	-45	-77	-100	-89	-88	dBc/Hz
	@ 155.52 MHz	-42	-66	-76	-80	-89	dBc/Hz
	Modulation Bandwidth	fm	10			kHz	
	Input Impedance (Pin 1)	Zin	100			KΩ	
	Control Voltage	Vc	0	2.5	5.0	VDC	
	Center Frequency	Vc0		2.5		VDC	
	Pullability		1.8	3.2	4.5	ppm/V	
	Deviation Slope						Negative, Monotonic
Environmental	Mechanical Shock	Per MIL-STD-202, Method 213, Condition C					
	Vibration	Per MIL-STD-202, Method 201 & 204					
	Reflow Solder Conditions	240°C for 10 s max.					
	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% 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.

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