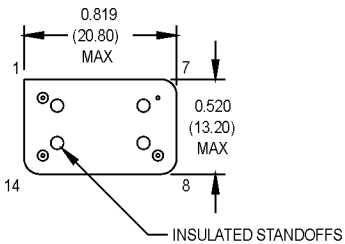
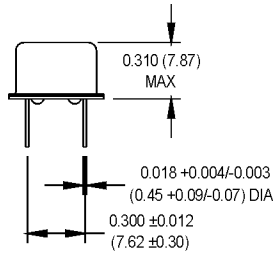
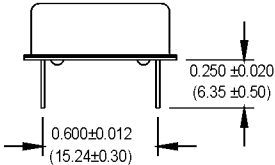


MTXO Series 5.0 Volt TCXO



All dimensions
in inches (mm).

* See page 90 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	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)							

PARAMETER	Symbol	Min.	Typ.	Max.	Units	Condition
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. 50 Ohms				TTL and HCMOS 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				4.2	ps RMS	1 Sigma
@ 19.44 MHz				8.7	ps RMS	
@ 38.88 MHz				5.5	ps RMS	
@ 155.52 MHz						
Phase Noise (Typical)		10 Hz	100 Hz	1 kHz	10 kHz	100 kHz
@ 19.44 MHz	-78	-103	-136	-143	-146	Offset from carrier
@ 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
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 ⁻⁵ 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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M-tron Industries, Inc., PO Box 630, Yankton, SD 57078-0630, USA Phone: 605-665-9321 or 1-800-762-8800 Fax: 605-665-1709 Website: www.mtron.com
M-tron Industries Limited, 1104 Shanghai Industrial Investment Building, 48-62 Hennessy Road, Wanchai, Hong Kong, China Phone: 852-2866-8023 Fax: 852-2529-1822