

T-50-23

Crystal Clock Oscillators TTL and CMOS

LOW COST HYBRID DIP CLOCK OSCILLATORS

CRYSTEK Crystal clock oscillators combine the latest technological advances and automated production techniques.

Some Important Features:

Low Power Consumption
Hermetically "resistance weld" sealed
Reliable, durable, economical

CRYSTEK's 31 years of experience and expertise in crystals and crystal oscillators assures our customers of dependable quality and state-of-the-art designs.

GENERAL SPECIFICATIONS

Frequency Tolerances range from ± 1000 ppm to ± 25 ppm

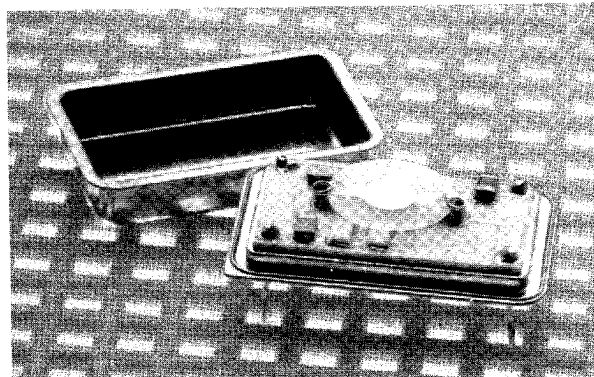
Standard Tol.: ± 100 ppm

Operating Temperature: 0° - 70°C

Storage Temperature: -55° to $+125^{\circ}\text{C}$

Aging: ± 5 ppm

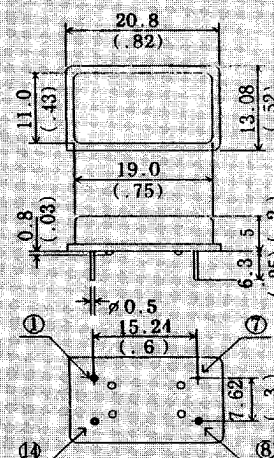
CRYSTEK PT. #	STANDARD SIZE OSC.		½ SIZE OSC.	
	TTL CCO-010	C-MOS CCO-020	TTL CCO-21S	C-MOS CCO-11S
FREQ. RANGE	300 KHz - 70 MHz	300 KHz - 70 MHz	300 KHz - 40 MHz	
INPUT VOLTAGE	5.0V ± 5% or 10%		5.0V ± 10%	
INPUT CURRENT		300KHz - 3MHz 10 mA Max.	30 mA Max.	30 mA Max.
	300KHz - 39MHz 30 mA Max.	3 - 20MHz 20 mA Max.		
	40 - 70MHz 70 mA Max.	20 - 70MHz 40 mA Max.		
RISE & FALL TIME	300KHz - 19MHz 15 ns Max.	10 ns Max.	5 ns	10 ns Max.
	19 - 70 MHz 10 ns Max.			
SYMMETRY	50/50 ± 10%			
OPERATING TEMP.	TTL: 0°C - +70°C CMOS: -20°C - +70°C			
FIGURE	FIG. 1		FIG. 2	



OPTIONAL:

- ENABLE/DISABLE AND TRI-STATE (CCO-011 & CCO-032)
- TTL AND C-MOS COMPATIBLE
- C-MOS OSC. & HC-MOS (HIGH SPEED C-MOS) OSC.
- SURFACE MOUNT TYPE OSCILLATORS
- DUAL FREQUENCY OSCILLATOR

Figure 1
14 PIN DIP PKG.



OPTIONAL
(SMD TYPE OSC.)

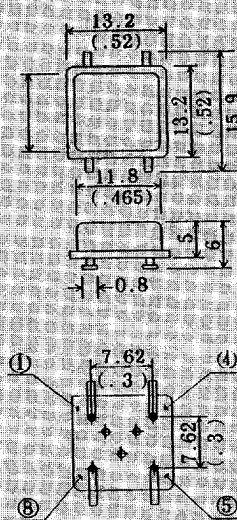
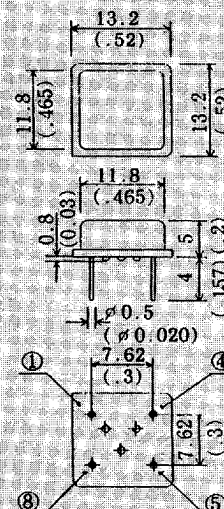


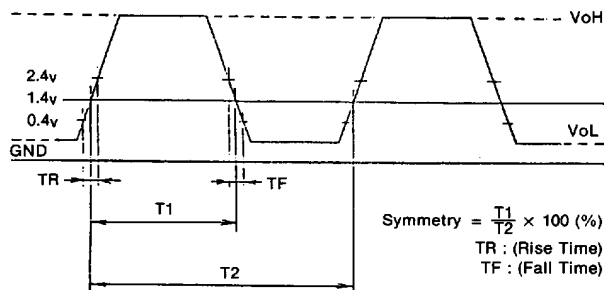
Figure 2
8 PIN DIP PKG.
HALF SIZE



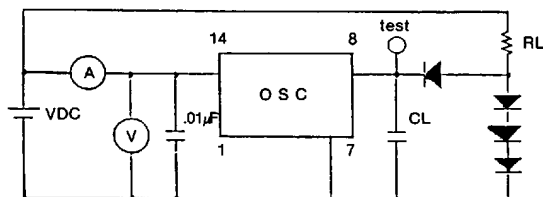
DIMENSIONS $\frac{\text{MM}}{\text{INCHES}}$

Output Waveforms/Test Circuits

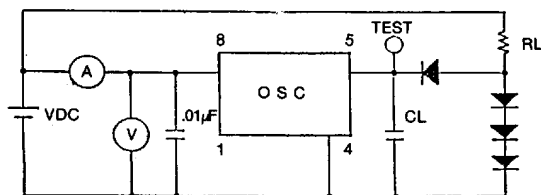
TTL



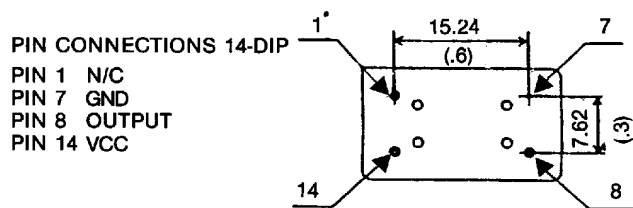
(14 PIN TTL OSC.)



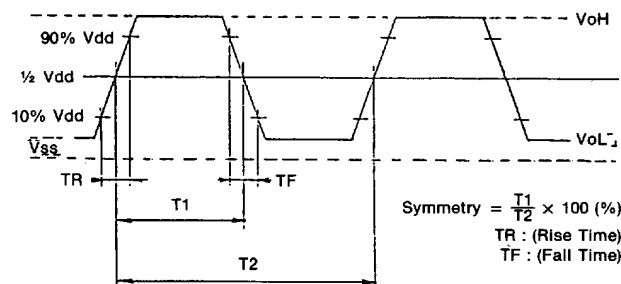
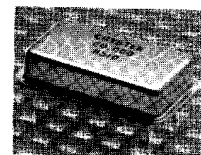
(8 PIN TTL OSC.)



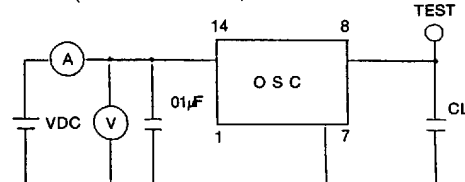
RL : 390 Ω
CL : 15 pF



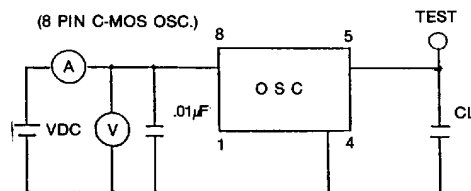
CMOS



(14 PIN C-MOS OSC.)



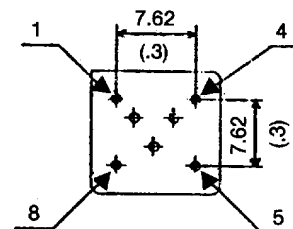
(8 PIN C-MOS OSC.)



CL : 15 pF

PIN CONNECTIONS 8-DIP

PIN 1 N/C
 PIN 4 GND
 PIN 5 OUTPUT
 PIN 8 VDD



When your application calls for different oscillators call our sales department for immediate response.