

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

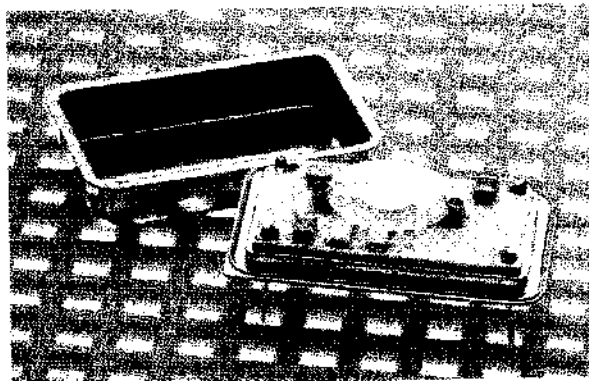
Frequency Tolerances range from ± 1000 ppm to ± 25 ppm

Standard Tol.: ± 100 ppm

Operating Temperature: $0^\circ - 70^\circ\text{C}$

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

Aging: ± 5 ppm



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

CRYSTEK P.T. #	STANDARD SIZE OSC		1/2 SIZE OSC	
	TTL CCO-010	CMOS CCO-020	TTL CCO-015	CMOS CCO-015
FREQ. RANGE	800 KHz - 70 MHz	300 KHz - 70 MHz	300 KHz - 40 MHz	
INPUT VOLTAGE	5.0V $\pm 5\%$ or 10%		5.0V $\pm 10\%$	
INPUT CURRENT	300KHz - 39MHz 30 mA Max.	300KHz - 39MHz 10 mA Max.	30 mA Max.	30 mA Max.
	40 - 70MHz 70 mA Max.	3 - 20MHz 20 mA Max.		
RISE & FALL TIME	300KHz - 10MHz 16 ns Max.	10 ns Max.	6 ns	10 ns Max.
	10 - 70MHz 10 ns Max.			
SYMMETRY	50/50 $\pm 10\%$			
OPERATING TEMP.	TTL: $0^\circ\text{C} - 70^\circ\text{C}$ CMOS: $20^\circ\text{C} - 70^\circ\text{C}$			
FIGURE	FIG. 1		FIG. 2	

Figure 1
14 PIN DIP PKG.

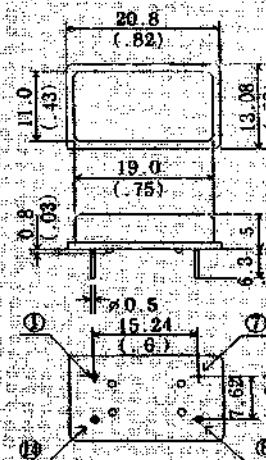
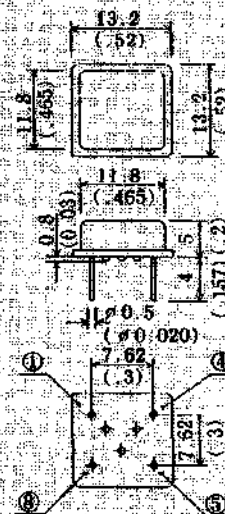
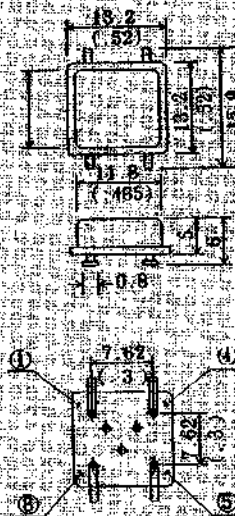


Figure 2
8 PIN DIP PKG
HALF SIZE



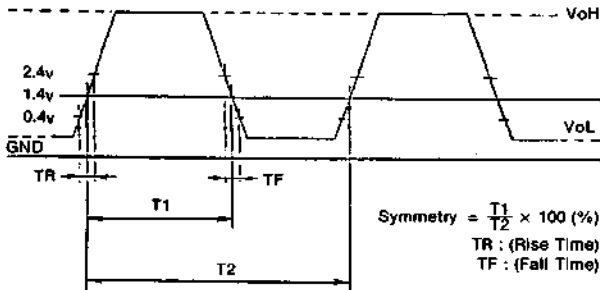
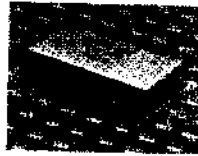
DIMENSIONS — MM
INCHES

OPTIONAL (SMD TYPE OSC.)

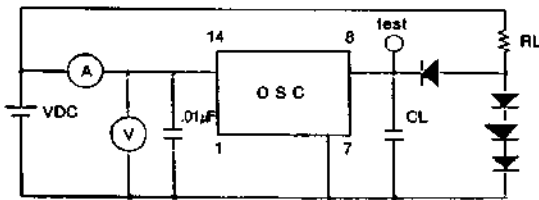


Output Waveforms/Test Circuits

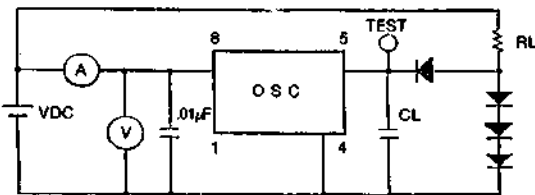
TTL



(14 PIN TTL OSC.)



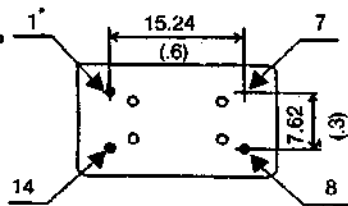
(8 PIN TTL OSC.)



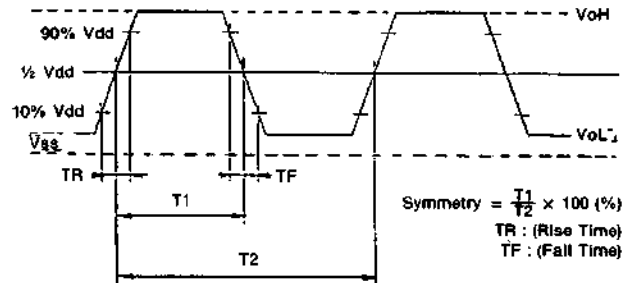
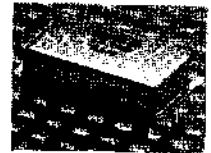
RL : 390 Ω
CL : 15 pF

PIN CONNECTIONS 14-DIP

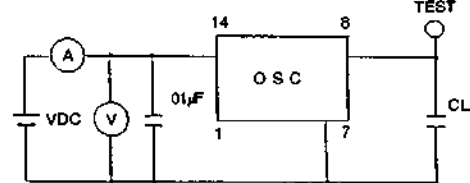
- PIN 1 N/C
- PIN 7 GND
- PIN 8 OUTPUT
- PIN 14 VCC



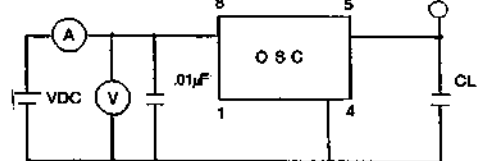
CMOS



(14 PIN C-MOS OSC.)



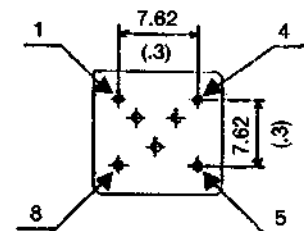
(8 PIN C-MOS OSC.)



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.