



## Clock Oscillator

TTL / HCMOS, TRISTATE

Combine state-of-the-art, thick film hybrid technology with precision quartz oscillators to achieve unsurpassed qualities of small size, cost, high reliability and frequency accuracy.

The crystal clock oscillator is composed of a crystal resonator and an oscillator circuit which is made by the hybrid IC technique. So, the oscillator itself is the perfect stable oscillator. This technique and process are entirely IC's one, so you can expect high reliability on it.

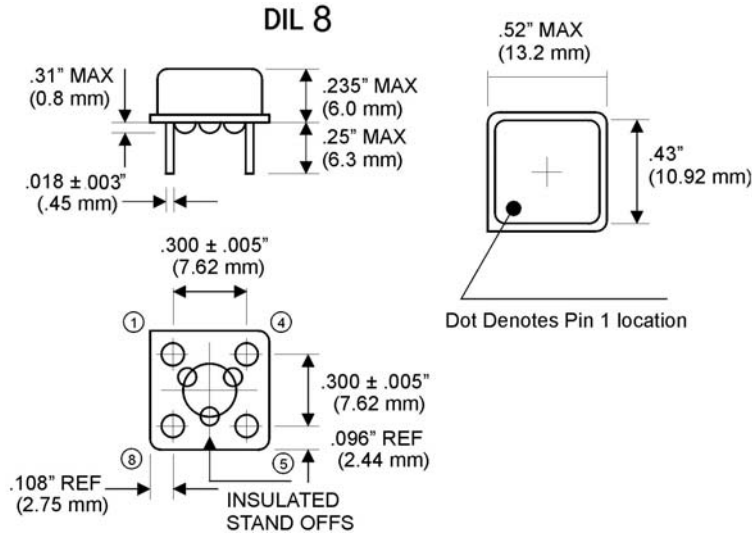
### Standard Specifications

item	TTL & HCMOS
model	KXO-210
package	DIL 8
frequency range	0,5 ~ 100 MHz *
frequency stability	standard $\pm 100$ ppm available $\pm 25$ ppm $\sim \pm 100$ ppm
storage temperature range	$-55^{\circ}\text{C} \sim +125^{\circ}\text{C}$
operating temperature range	standard $-20^{\circ}\text{C} \sim +70^{\circ}\text{C}$ available $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$ (=KXO-215)
symmetry	standard 60/40% ( $+1/2 V_{DD}$ ) available 55/45%
rise and fall time max.	10 ns 0.5 ~ 25 MHz 6 ns 25.1 ~ 70 MHz 4 ns 70.1 ~ 100 MHz
"O" level (max.)	+0.5V ( $10\% V_{DD}$ )
"1" level (min.)	+ 4.5V ( $90\% V_{DD}$ )
input voltage	+5.0VDC $\pm 10\%$
input current max.	20mA 0.5 ~ 20MHz 40mA 20.1 ~ 70MHz 60mA 70.1 ~ 100MHz
output load	1 - 8 TTL or CL = 50pF (TYP)
dimension	fig.2
logic family	TTL & HCMOS compatible
test circuit	fig. 3, 4
pin connection	# 1 (#1): N/C # 7 (#4): CASE GND # 8 (#5): OUTPUT #14 (#8): $+V_{DD}$
RoHS	according to RoHS 2011/65/EU
packing unit	40 pcs.
part no.	12.91500~12.91999

\* > 100,0 MHz on request

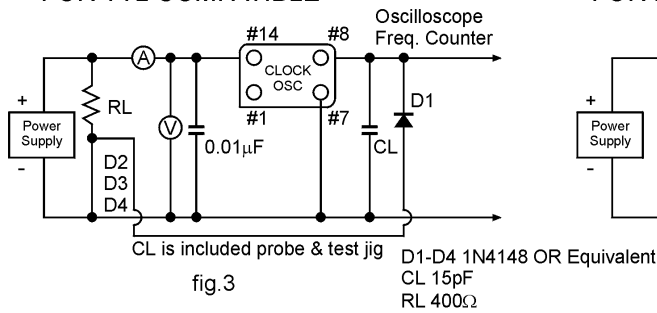


**Dimensions:**

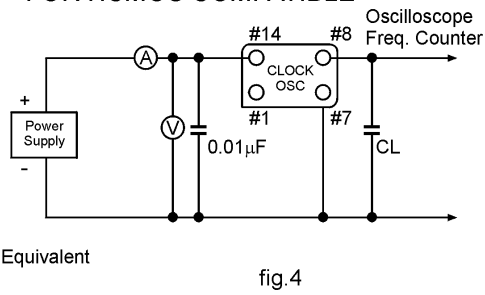


**Test Circuit:**

**FOR TTL COMPATIBLE**



**FOR HCMOS COMPATIBLE**



**Output Wave Shape:**

