

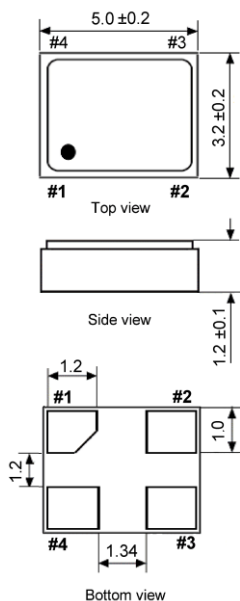


# Clock Oscillator

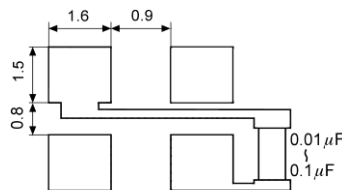
SMD-version +1.8 / +2.5 / +3.0 / +3.3 V

part no.	12.xxxxx				
model	KXO-V99				
frequency range	1.0 ~ 39.999 MHz	40.0 ~ 59.999 MHz	60.0 ~ 69.999 MHz	70.0 ~ 79.999 MHz	80.0 ~ 200.0 MHz
frequency stability at -20° ~ +70°C; -40° ~ +85°C -40° ~ +105°C; -40° ~ +125°C	±25 ppm, ±50 ppm ±30 ppm; ±50 ppm; ±100 ppm				
operating temperature	standard -20° ~ +70°C available -40° ~ +85°C (=KXO-V99T); -40° ~ +105°C (=KXO-V99E); -40° ~ +125°C (=KXO-V99F)				
storage temperature	-55° ~ +125°C				
supply voltage range	+1.8 V ~ +3.3 V				
supply voltage V <sub>DD</sub>	standard +3.3 V DC ±5 % available +1.8 V DC ±5 %, +2.5 V DC ±5 %, +3.0 V DC ±5 %				
supply current max		+1.8 V	+2.5 V	+3.0 V / +3.3 V	
	1.0 ~ 39.999 MHz	4 mA	6 mA	10 mA	
	40.0 ~ 59.999 MHz	6 mA	8 mA	15 mA	
	60.0 ~ 69.999 MHz	10 mA	12 mA	20 mA	
	70.0 ~ 79.999 MHz	25 mA	30 mA	40 mA	
80.0 ~ 200.0 MHz	40 mA	40 mA	40 mA		
symmetry	45 % ~ 55 % at 50 % V <sub>DD</sub> level				
rise & fall time max.	5 ns				
"O" level max.; "1" level min.	VOL: 10 % V <sub>DD</sub> ; VOH: 90 % V <sub>DD</sub>				
tri-state control voltage (Pin#1)	VIH: V <sub>DD</sub> x 0.7 min.; VIL: V <sub>DD</sub> x 0.3 max.				
output load	1.0 ~ 75.0 MHz 30 pF, 15 pF 75.1 ~ 200.0 MHz 15 pF				
start up time max.	10 ms				
disable/enable delay time	200 ns max. / 10 ms max.				
standby current max.	20 µA				
jitter	deterministic jitter	5 ps max.	norm 1-sigma	7 ps max.	
	random jitter	7 ps max.	peak to peak	40 ps max.	
contents of reel	1000 pcs.				

**Dimensions (mm):**



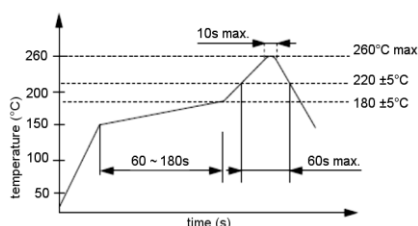
**Suggested soldering pad:**



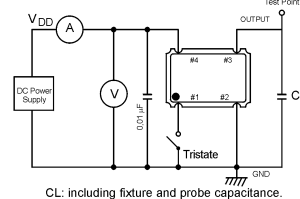
PIN	Connection
1	"L" (0V) "H" or OPEN
2	GND
3	Z OUTPUT
4	V <sub>DD</sub>

Z: high impedance

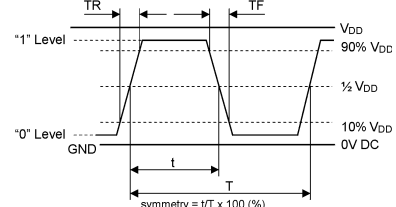
**Reflow soldering condition:**



**Test circuit:**



**Output waveform:**



**Tape specification:**

