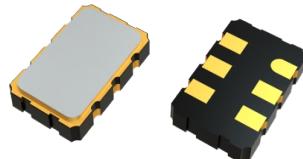


# 5.0 x 3.2 mm SMD Voltage Controlled Crystal Oscillator

## Feature

- Typical 5.0 x 3.2 x 1.25 mm 6 pads ceramic SMD package
- Tight symmetry (45 to 55%) available
- Output frequency up to 250 MHz
- Tri-state enable/disable
- Pb-free/ RoHS compliant



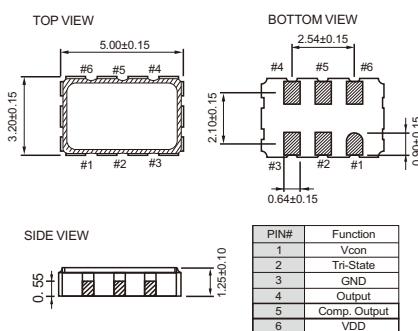
## Electrical Specifications

Parameter	2.5V / 3.3V		Unit
	Min.	Max.	
Supply Voltage Variation(VDD)	VDD-5%	VDD+5%	V
Frequency Range	10	250	MHz
Absolute Pulling Range (APR)	±50	-	ppm
Control Voltage Range	0.3	3.0	V
Supply Current	10 MHz $\leq$ Fo < 160 MHz	-	mA
	160 MHz $\leq$ Fo $\leq$ 250 MHz	-	
Output Level (CMOS)	Output High (Logic"1")	2.97	V
	Output Low (Logic"0")	0.33	
Transition Time ( 10% ~ 90% ) Rise/Fall Time +	-	2	nSec
Duty Cycle	45	55	%
Start Time	-	2	mSec
Tri-State (input to Pin 2)	Enable	2.31	V
	Disable	-	
Period Jitter (Pk-Pk)	-	150	pSec
RMS Phase Jitter (Integrated 12kHz~20MHz)	-	1	pSec
Linearity	-	10	%
Modulation Bandwidth (BW)	10	-	kHz
Input Impedance	1000	-	kΩ
Phase Noise@155.52MHz	100 Hz	-75	dBc/Hz
	1 kHz	-105	
	10kHz	-125	
Aging ( @ 25°C 1st year)	-	±3	ppm
Storage Temp. Range	-55	125	°C

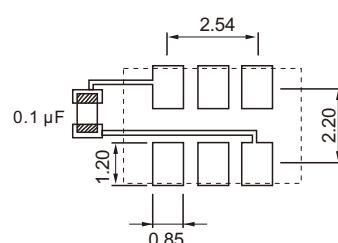
Standard frequencies are frequencies which the crystal has been designed and does not imply a stock position.

+ Transition times are measured between 10% and 90% of V DD , with an output load of 15pF.

## Dimension(mm)



## Solder Pad Layout(mm)



To ensure optimal oscillator performance, place a by-pass capacitor of 0.1  $\mu$ F as close to the part as possible between Vdd and GND pads.

## FREQ. STABILITY vs. TEMP. RANGE

Temp. (°C)	ppm	±25	±50
-10 ~ +60	O	O	
-20 ~ +70	O	O	
-40 ~ +85	Δ	O	

o: Available Δ:Conditional X: Not available

Inclusive of calibration @ 25 °C, operating temperature range, input voltage variation, load variation, aging (1 st year), shock, and vibration