

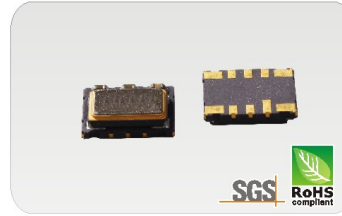
## 7.0 \* 5.0 SMD High Precision VCTCXO

### FEATURE

Typical 7.0x5.0x1.85 mm ceramic SMD package.  
 High Precision for -40 °C~+85 °C, ±0.28ppm  
 CMOS and Clipped Sine wave (without DC-cut capacitor) output optional

### APPLICATION

Femtocell, Base Stations  
 WLAN/WIMAX/WiFi, Wireless Communications  
 Mobile Phone

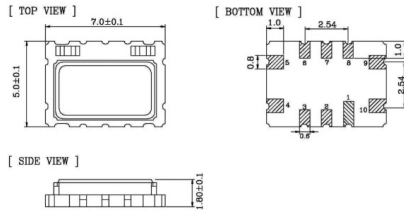


### ELECTRICAL SPECIFICATION

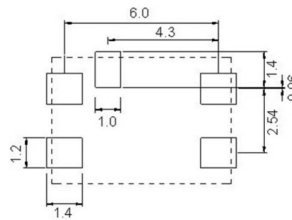
Parameter	5.0V		3.3V		Unit
	Min.	Max	Min.	Max.	
Supply Voltage Variation (VDD) 5%	4.75	5.25	3.135	3.465	V
Frequency Range	5	40	5	40	MHz
Standard Frequency (for CMOS)	5, 6, 4, 8, 8, 192, 10, 12.5, 12.8, 16, 16, 384, 19, 44, 25				
Standard Frequency (for Clipped Sine)	8, 192, 10, 12.5, 12.8, 16, 16, 384, 19, 44, 25				ppm
Frequency Tolerance*	-	±2.0	-	±2.0	
Frequency Stability					
Vs Supply Voltage (±5%) change	-	±0.5	-	±0.5	ppm
Vs Load (±10%) change	-	±0.2	-	±0.2	
Vs Aging	-	±1.0	-	±1.0	
Supply Current (CMOS output)	-	6	-	6	mA
Supply Current (Clipped Sine Wave)	-	3.5	-	3.5	
Output Level (CMOS)					
Output High (Logic '1')	90%VDD	-	90%VDD	-	V
Output Low (Logic '0')	-	10%VDD	-	10%VDD	
Duty	45	55	45	55	%
Output Level (Clipped Sine Wave)	0.8	-	0.8	-	Vp-p
Load (CMOS)	15pF		15pF		
Load (Clipped Sine Wave)	10KΩ/10pF		10KΩ/10pF		
Control Voltage Range (VCTCXO)	0.5	2.5	0.5	2.5	V
Pulling Range (VCTCXO)	±5.0	±12.0	±5.0	±12.0	ppm
Vc Input Impedance (VCTCXO)	100	-	100	-	KΩ
Phase Noise @ 12.8 MHz					
100 Hz	-	-120	-	-120	dBc / Hz
1 KHz	-	-140	-	-140	
10 KHz	-	-148	-	-148	
Start Time	-	2	-	2	mSec
Tri - State	-	0.3VDD	-	0.3VDD	
Disable	-	0.3VDD	-	0.3VDD	V
Enable	0.7VDD	-	0.7VDD	-	
Storage Temp. Range	-55	125	-55	125	°C

Standard frequencies are frequencies which the crystal has been designed and does not imply a stock position  
 \*Frequency at 25 °C, 1 hour after reflow Packing: Tape & Reel 1000/3000 pcs per Reel.

### DIMENSION (mm)



### SOLDER PAD LAYOUT(mm)



Pin	Function
1	NC
2	NC
3	NC
4	GND
5	CMOS-Clipped Sinewave Output
6	NC
7	NC
8	Tri-State Control
9	VDD
10	VDD/VCTCXO GND/TCXO

### FREQ. STABILITY vs. TEMP. RANGE

Temp. (°C)	ppm					
	±0.05	±0.1	±0.14	±0.28	±0.37	±0.5
0~+55	O	O	O	O	O	O
-10~+60	O	O	O	O	O	O

Temp. (°C)	ppm					
	±0.05	±0.1	±0.14	±0.28	±0.37	±0.5
-20~+70	Δ	O	O	O	O	O
-40~+85	X	X	X	O	O	O

\* O: Standard Δ: Available (case by case) X: Not available