

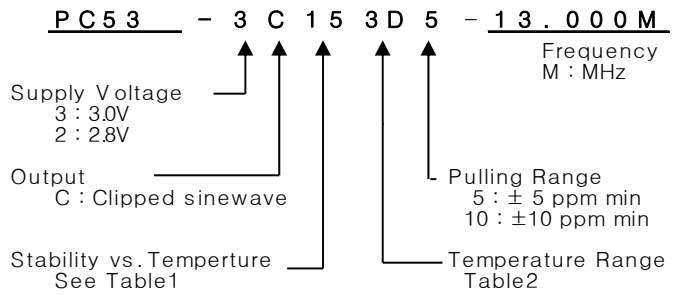
# VCTCXO

## PC53 Series

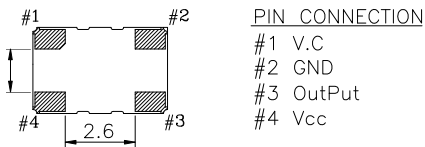
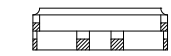
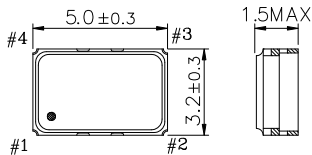
### Clipped sinewave

### 4PAD SMD PACKAGE

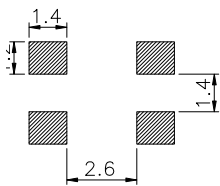
#### \* PART NUMBERING GUIDE



#### MECHANICAL DIMENSIONS



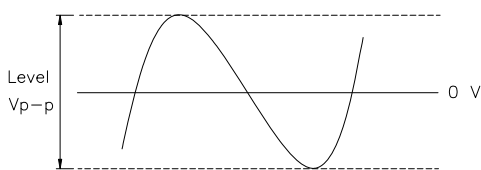
Recommended soldering pattern



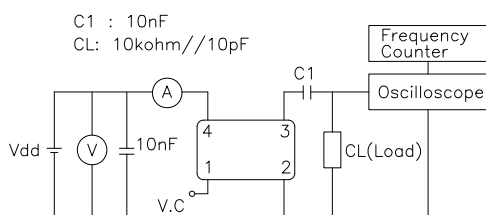
#### ELECTRICAL SPECIFICATION

Frequency range	10.000MHz to 40.000MHz
Frequency tolerance	$\pm 1.0$ ppm at 25deg
Frequency Stability vs. Temperature	$\pm 1.0$ ppm to $\pm 5.0$ ppm
vs. Supply Voltage	$\pm 0.3$ ppm max / $V_{dd} \pm 5\%$
vs. Load	$\pm 0.2$ ppm max / $15\text{pF} \pm 10\%$
vs. Aging	$\pm 1.0$ ppm max/ year
Temperature Range	
Operating	See Table 2
Storage	$-55^\circ\text{C}$ to $125^\circ\text{C}$
Supply Voltage	2.8V ~3.3V ( $\pm 5\%$ )
Input Current	2.0mA max.
Output characteristics	Level 3.0V 0.8Vp-p min
Clipped sinewave	Load 10k $\Omega$ //10pF
Phase Noise (typical)	-80 dBc / Hz @ 10Hz -110 dBc / Hz @ 100Hz -135 dBc / Hz @ 1KHz -140 dBc / Hz @ 10KHz -145 dBc / Hz @100KHz
20MHz offset	
Voltage Control Characteristics	
Output Pulling Range	$\pm 5.0$ ppm or $\pm 12$ ppm min
Control Voltage Range	$1.5\text{V} \pm 1.0\text{V}$ ( $V_{dd} : 3.0\text{V}$ )

#### OUTPUT WAVEFORM



#### TEST CIRCUIT



#### ENVIROMENTAL & MECHANICAL SPECIFICATION

Shock	MIL-STD-883C, Method 2002, Condition B
Vibration	MIL-STD-883C, Method 2007, Condition A
Solderability	MIL-STD-883C, Method 2003
Seal integrity	MIL-STD-883C, Method 1014, Condition C & A2
Marking	MIL-STD-202F, Method 215

#### TABLE1

Symbol	Stability
10	$\pm 1.0$ ppm
15	$\pm 1.5$ ppm
20	$\pm 2.0$ ppm
25	$\pm 2.5$ ppm
30	$\pm 3.0$ ppm
35	$\pm 3.5$ ppm
50	$\pm 5.0$ ppm

#### TABLE2

Symbol	Temp.	Symbol	Temp.
0	0 $^\circ\text{C}$	A	50 $^\circ\text{C}$
1	-10 $^\circ\text{C}$	B	60 $^\circ\text{C}$
2	-20 $^\circ\text{C}$	C	70 $^\circ\text{C}$
3	-30 $^\circ\text{C}$	D	75 $^\circ\text{C}$
4	-40 $^\circ\text{C}$	E	80 $^\circ\text{C}$
		F	85 $^\circ\text{C}$