

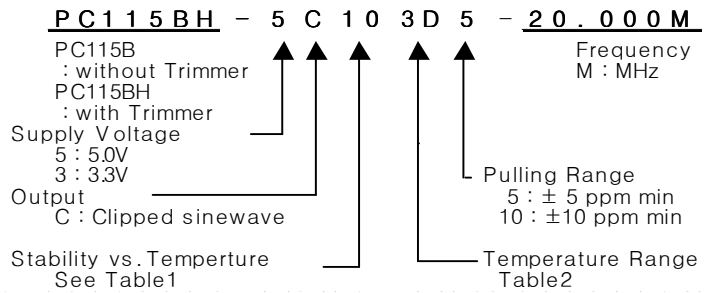
# VCTCXO

PC115B Series

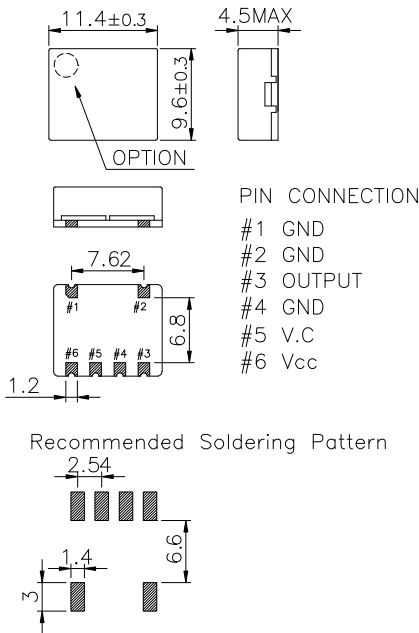
Clipped sinewave

6PAD SMD PACKAGE

## \* PART NUMBERING GUIDE



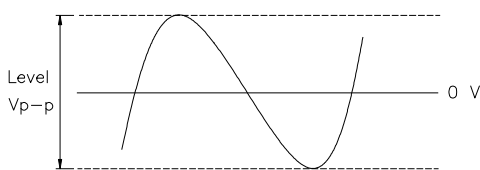
### MECHANICAL DIMENSIONS



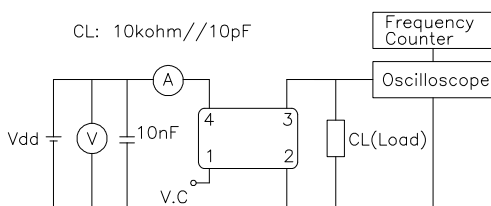
### ELECTRICAL SPECIFICATION

Frequency range	10.000MHz to 40.000MHz Contact us if need high frequency
Frequency Stability vs. Temperature vs. Supply Voltage vs. Load vs. Aging	$\pm 0.5$ ppm to $\pm 5.0$ ppm $\pm 0.2$ ppm max / $V_{dd} \pm 5\%$ $\pm 0.2$ ppm max / $15\text{pF} \pm 10\%$ $\pm 1.0$ ppm max/ year
Temperature Range Operating Storage	See Table 2 $-55^\circ\text{C}$ to $125^\circ\text{C}$
Supply Voltage	$3.3\text{V} \pm 5\%$ $5.0\text{V} \pm 5\%$
Input Current Clipped sinewave	10.00MHz ~ 40.000MHz $2.0\text{mA}$ max ~ $4\text{mA}$ max
Output characteristics	Clipped sinewave Level 3.3V 0.8Vp-p min 5.0V 1.0Vp-p min Load $10\text{k}\Omega//10\text{pF}$
Phase Noise (typical) 20MHz offset	$-80$ dBc / Hz @ 10Hz $-120$ dBc / Hz @ 100Hz $-135$ dBc / Hz @ 1KHz $-140$ dBc / Hz @ 10KHz $-145$ dBc / Hz @ 100KHz
Frequency Adjustment	$\pm 3$ ppm min by internal trimmer (OPTION)
Voltage Control Characteristics	
Output Pulling Range ( $\Delta F/\Delta V$ )	$\pm 5.0$ ppm or $\pm 10$ ppm min ( $\Delta F/\Delta V > \pm 20$ ppm is available, please contact us)
Control Voltage Range	$1.65\text{V} \pm 1.5\text{V}$ ( $V_{dd} : 3.3\text{V}$ ), $2.5\text{V} \pm 2.0\text{V}$ ( $V_{dd} : 5.0\text{V}$ )

### 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
05	$\pm 0.5$ ppm
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	$85^\circ\text{C}$