

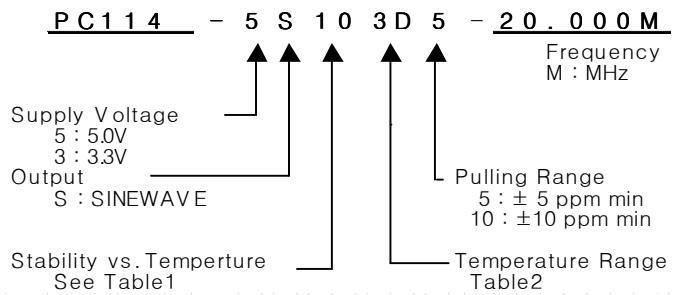
# VCTCXO

## PC114 Series

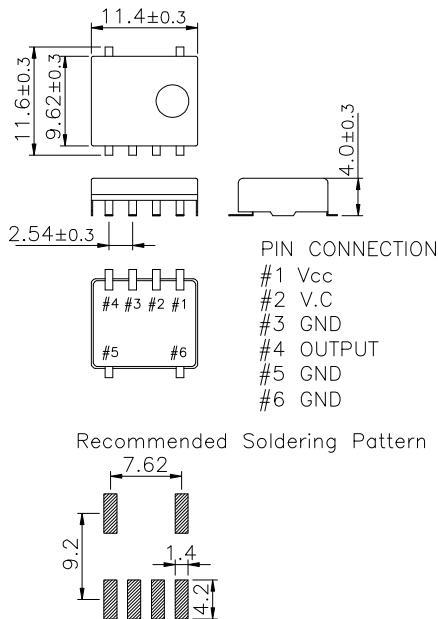
### Sinewave

### 6PAD SMD PACKAGE

#### \* PART NUMBERING GUIDE



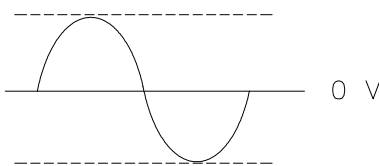
#### MECHANICAL DIMENSIONS



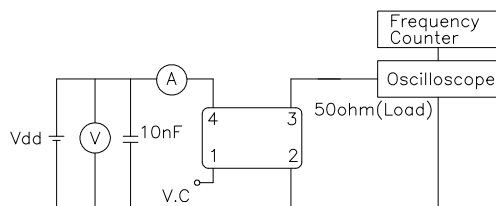
#### ELECTRICAL SPECIFICATION

Frequency range	10.000MHz to 50.000MHz
Frequency Stability vs. Temperature vs. Supply Voltage vs. Load vs. Aging	$\pm 0.5$ ppm to $\pm 5.0$ ppm $\pm 0.1 / \pm 0.2$ 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 Sinewave	10.00MHz ~ 50.000MHz 12.0mA max ~ 30mA max
Output characteristics	Level 3.3V Sinewave 5.0V 0 dBm typ 10 dBm typ Load 50 $\Omega$
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
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



#### ENVIRONMENTAL & 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	$85^\circ\text{C}$