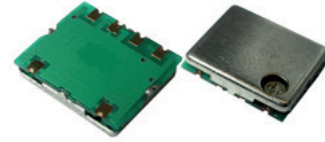


# SP4CVT HCMOS SURFACE MOUNT VCTCXO

## FEATURES

11.4 x 9.6 x 2.5 mm

- Metal SMD case
- Wide frequency range
- Mechanical trimmer option
- Applications: Reference clock, Communication equipment,...



Item	Specification						
Frequency Range	1.0 MHz to 125.0 MHz						
Output Logic	CMOS						
Supply Voltage V <sub>dd</sub> (see options)	+3.3 V ±5%		+5.0 V ±5%				
Supply Current I <sub>dd</sub>	40.0 mA max., frequency dependent						
Frequency Tolerance	With trimmer option: ±1.0 ppm at 25°C ±2°C (one hour after reflow) Without trimmer option: ±2.0 ppm at 25°C ±2°C (one hour after reflow)						
Frequency Stability vs Temperature (see options)		±0.5 ppm	±1.0 ppm	±1.5 ppm	±2.0 ppm	±2.5 ppm	±3.0 ppm
	0° to +50°C	o	o	o	o	o	o
	-10° to +60°C	◇	o	o	o	o	o
	-20° to +70°C	x	o	o	o	o	o
	-30° to +75°C	x	◇	o	o	o	o
	-30° to +85°C	x	◇	◇	o	o	o
	-40° to +85°C	x	◇	◇	o	o	o
		o = available		◇ = please contact us		x = not available	
Frequency Stability vs Aging	±1.0 ppm max. per year at 25°C						
Frequency Stability vs Voltage Change	±0.3 ppm max., for a ±5% input voltage change						
Frequency Stability vs Load Change	±0.3 ppm max., for a ±10% load condition change						
Output Level	VOH ≥ 0.9 V <sub>dd</sub>		VOL ≤ 0.1 V <sub>dd</sub>				
Output Load	15 pF						
Symmetry	45 / 55%						
Rise Time / Fall Time Fr / Ff	10 ns max.						
Start-up Time	5 ms typ., 10 ms max.						
Phase noise	Offset / dBc / Hz (typical)	10 Hz	100 Hz	1 kHz	10 kHz	100 kHz	
	10.000 MHz	-95 dBc / Hz	-130 dBc / Hz	-140 dBc / Hz	-145 dBc / Hz	-150 dBc / Hz	
	20.000 MHz	-80 dBc / Hz	-120 dBc / Hz	-135 dBc / Hz	-140 dBc / Hz	-145 dBc / Hz	
	77.760 MHz	-75 dBc / Hz	-105 dBc / Hz	-120 dBc / Hz	-125 dBc / Hz	-120 dBc / Hz	
Mechanical Frequency Tuning (see options)	±3.0 ppm min. tuning						
Voltage Control Function (see options)	<b>Control Voltage Range</b>	Center voltage +1.65 V, range ±1.35V		Center voltage +2.50 V, range ±2.0V			
	<b>Frequency Pulling Range</b>	±5 ppm min. ~ ±10 ppm min.					
	<b>Linearity</b>	10 % max.					
	<b>Slope Polarity</b>	Positive					
	<b>Input Impedance</b>	10 kΩ min.					
Packing Unit	1000 pcs / reel						
Soldering Conditions	260°C, 10 sec x2 max						
	<b>Customer specifications on request</b>						

## OPTIONS & ORDERING INFORMATION

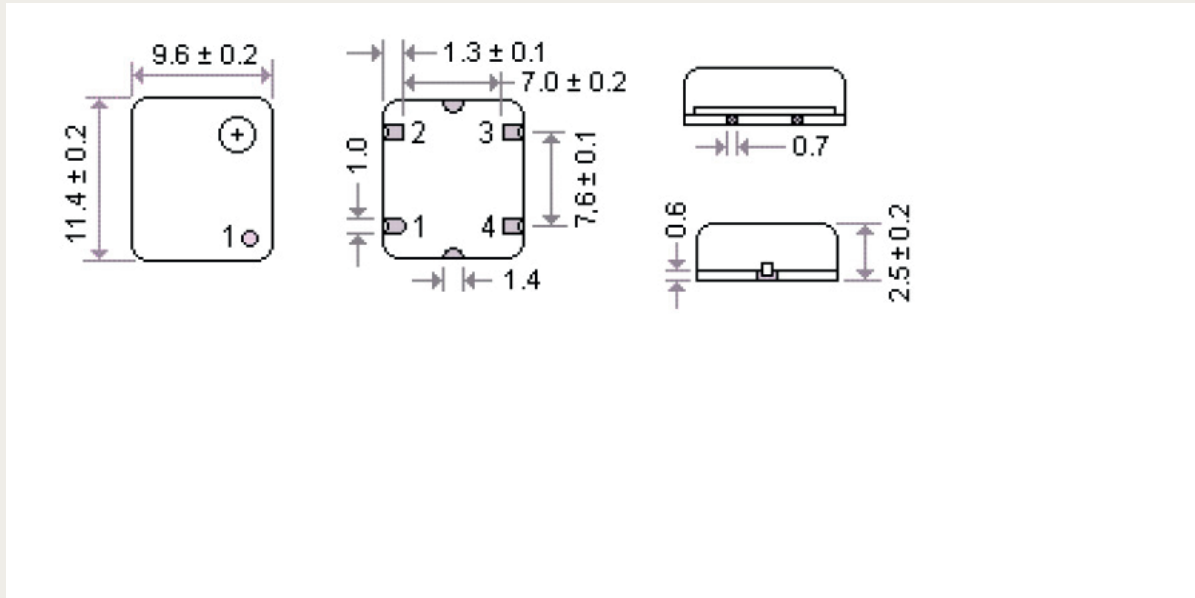
### SP4CVT

Supply Voltage	Operating Temp. *	Temperature Stability*	Tri-state Function	Package Type	Pulling **	Frequency in MHz	Mechanical Tuning
<b>33</b> = +3.3V <b>50</b> = +5.0V	<b>C</b> = 0° / +50°C <b>D</b> = -10° / +60°C <b>F</b> = -20° / +70°C <b>G</b> = -30° / +75°C <b>H</b> = -30° / +85°C <b>K</b> = -40° / +85°C	<b>0.5</b> = ±0.5 ppm <b>1.0</b> = ±1.0 ppm <b>1.5</b> = ±1.5 ppm <b>2.0</b> = ±2.0 ppm <b>2.5</b> = ±2.5 ppm <b>3.0</b> = ±3.0 ppm	<b>F</b> = No Tri-state	<b>4P</b> = 4-pad version <b>6P</b> = 4-pad version	<b>05</b> = ±5 ppm min. <b>10</b> = ±10 ppm min.	Please specify the frequency in MHz	<b>Blanc</b> = no trimmer <b>-T</b> = Trimmer option

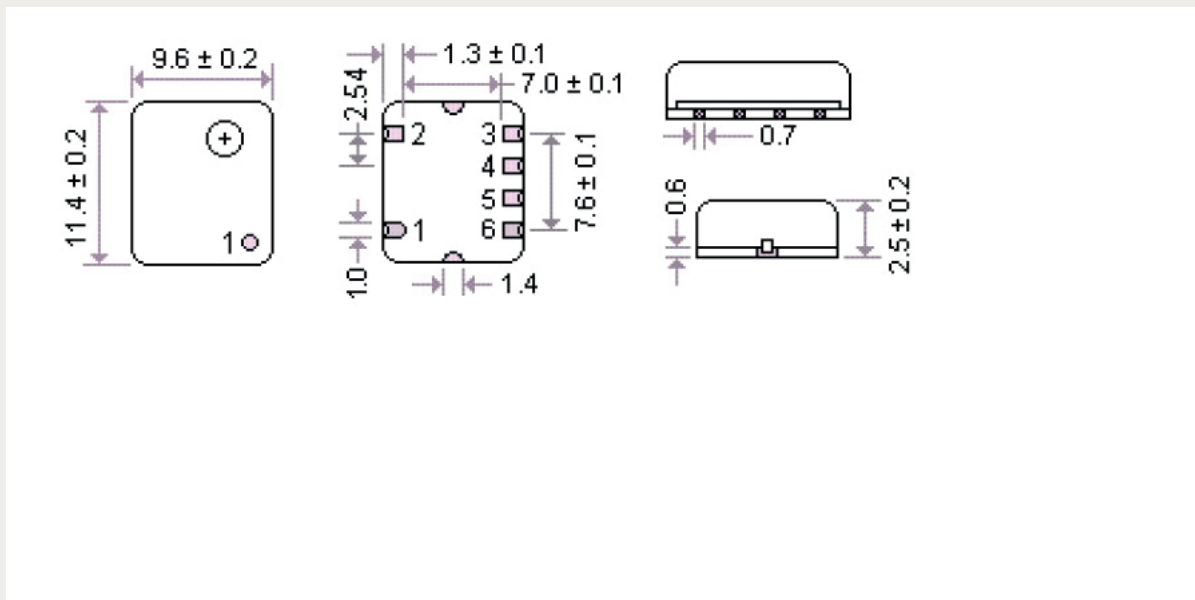
(\*) Note : Not all combinations are possible, please consult us.

(\*\*) Other pulling range is available on customer specification.

# OUTLINE DIMENSIONS



Pin Connections #1 : Control voltage #2 : GND #3: Output #4 : Vdd



Pin Connections #1 : GND #2 : GND #3: Output #4 : GND #5 : Control voltage #6: Vdd