

# SX7CVTT

# HCMOS SURFACE MOUNT VCTCXO

## FEATURES

7.0 x 5.0 x 1.9 mm

- Miniature package
- High precision for -10° to +70°C , ± 0.05 ppm
- -40° to +85°C , ± 0.20 ppm
- Applications: Femtocell, Base stations, Wireless communications, ...



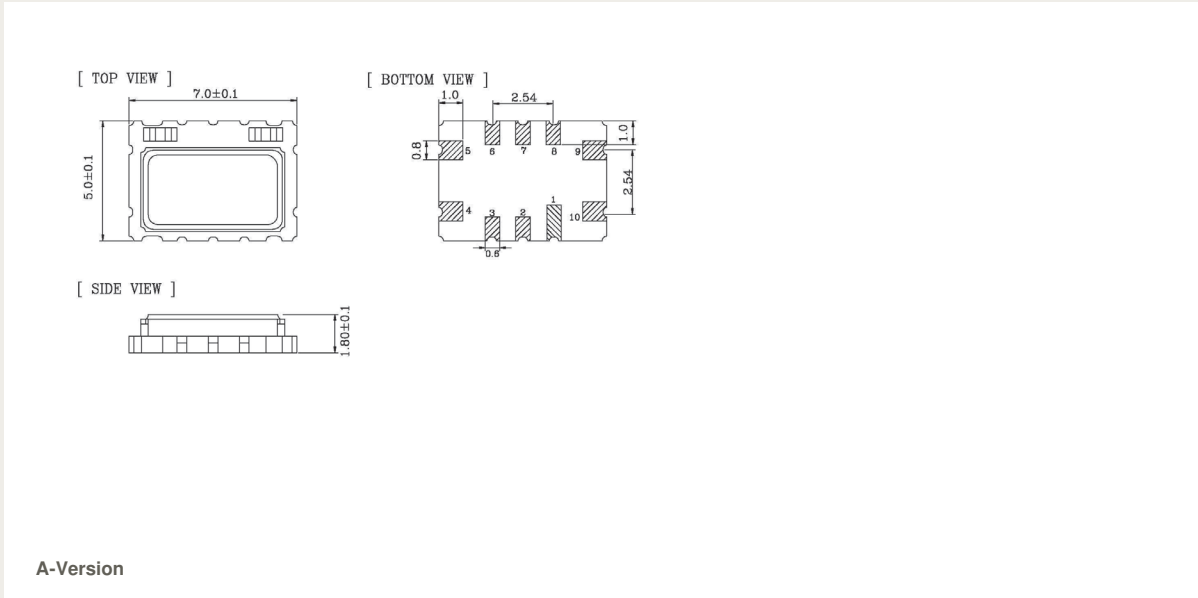
Item	Specification																																								
Frequency Range	5.0 MHz ~ 52.0 MHz																																								
Standard Frequency	10.000 ; 12.800 ; 16.384 ; 19.200 ; 19.440 ; 20.000 ; 25.000 ; 26.000																																								
Output Logic	CMOS																																								
Supply Voltage Vdd (see options)	+3.3 V ±5%      +5.0 V ±5%																																								
Supply Current Idd	6.0 mA max.																																								
Frequency Tolerance	±2.0 ppm max. at 25°C ±2°C (one hour after reflow)																																								
Frequency Stability vs Temperature (see options)	<table border="1"> <thead> <tr> <th></th> <th>±0.05 ppm</th> <th>±0.10 ppm</th> <th>±0.14 ppm</th> <th>±0.20 ppm</th> <th>±0.28 ppm</th> <th>±0.37 ppm</th> <th>±0.5 ppm</th> </tr> </thead> <tbody> <tr> <td>0° to +55°C</td> <td>o</td> <td>o</td> <td>o</td> <td>o</td> <td>o</td> <td>o</td> <td>o</td> </tr> <tr> <td>-10° to +60°C</td> <td>o</td> <td>o</td> <td>o</td> <td>o</td> <td>o</td> <td>o</td> <td>o</td> </tr> <tr> <td>-10° to +70°C</td> <td>◊</td> <td>o</td> <td>o</td> <td>o</td> <td>o</td> <td>o</td> <td>o</td> </tr> <tr> <td>-40° to +85°C</td> <td>x</td> <td>x</td> <td>x</td> <td>o</td> <td>o</td> <td>o</td> <td>o</td> </tr> </tbody> </table> <p>o = available      ◊ = please contact us      x = not available</p>		±0.05 ppm	±0.10 ppm	±0.14 ppm	±0.20 ppm	±0.28 ppm	±0.37 ppm	±0.5 ppm	0° to +55°C	o	o	o	o	o	o	o	-10° to +60°C	o	o	o	o	o	o	o	-10° to +70°C	◊	o	o	o	o	o	o	-40° to +85°C	x	x	x	o	o	o	o
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Frequency Stability vs Aging	±1.0 ppm max. per year at 25°C																																								
Frequency Stability vs Voltage Change	±0.05 ppm max., for a ±5% input voltage change																																								
Frequency Stability vs Load Change	±0.05 ppm max., for a ±10% load condition change																																								
Output Level	VOH ≥ 0.9 Vdd      VOL ≤ 0.1 Vdd																																								
Output Load	15 pF																																								
Symmetry	45 / 55%																																								
Rise Time / Fall Time Fr / Ff	10 ns max.																																								
Start-up Time	2.0 ms max.																																								
Tri-state function (Only possible for A-version package)	pin #8 = high or open      pin#5 ==> oscillation pin #8 = low      pin#5 ==> high impedance																																								
Phase Noise	<table border="1"> <thead> <tr> <th>Offset / dBc / Hz</th> <th>100 Hz</th> <th>1 kHz</th> <th>10 kHz</th> </tr> </thead> <tbody> <tr> <td>(typical)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>12.800 MHz</td> <td>-130 dBc / Hz</td> <td>-145 dBc / Hz</td> <td>-154 dBc / Hz</td> </tr> </tbody> </table>	Offset / dBc / Hz	100 Hz	1 kHz	10 kHz	(typical)				12.800 MHz	-130 dBc / Hz	-145 dBc / Hz	-154 dBc / Hz																												
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Voltage Control Function	<b>Control Voltage Range</b> Center voltage +1.5 V, range ±1.0V <b>Frequency Pulling Range</b> ±5 ppm min. <b>Linearity</b> 10 % max. <b>Slope Polarity</b> Positive <b>Input Impedance</b> 100 kΩ min.																																								
Packing Unit	1000 pcs / reel																																								
Soldering Condition	260°C, 10 sec x2 max																																								

## OPTIONS & ORDERING INFORMATION

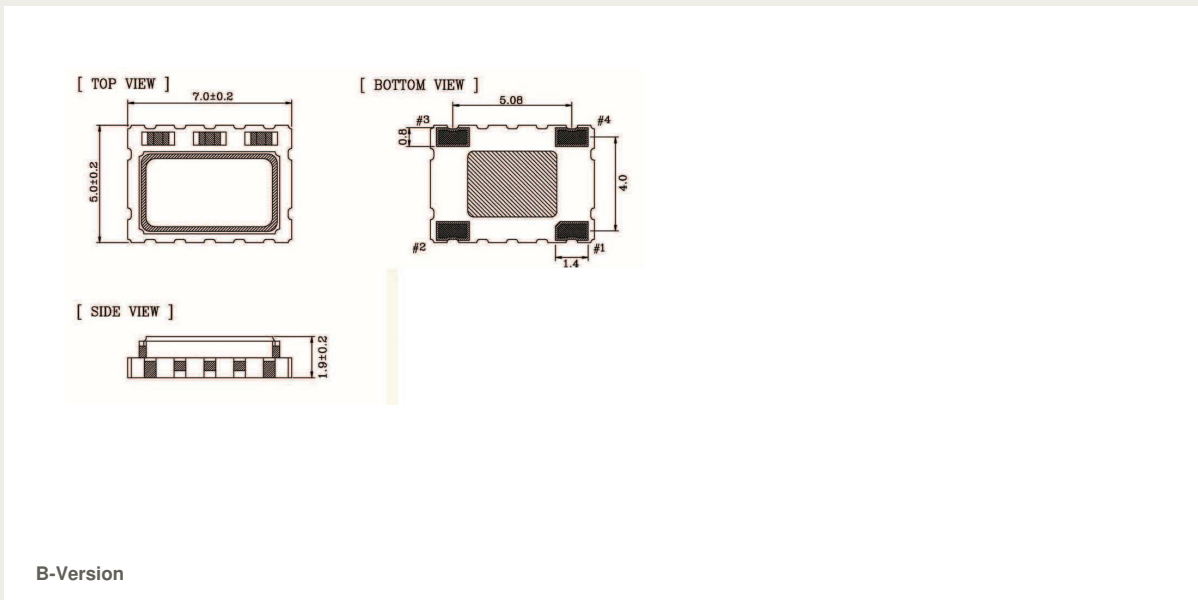
SX7CVTT	.....	- .....	.....	.....	.....	..... MHz
Supply Voltage *	Operating Temp. *	Temperature Stability *	Tri-state Function *	Package type	Pulling	Frequency in MHz
<b>33</b> = +3.3V	<b>C</b> = 0° / +55°C	<b>0.05</b> = ±0.05 ppm	<b>E8</b> = Tri-state, pin #8	<b>A</b> = A-version	<b>05</b> = ±5 ppm min.	Please specify the frequency in MHz
<b>50</b> = +5.0V	<b>D</b> = -10° / +60°C	<b>0.10</b> = ±0.10 ppm	<b>F</b> = No Tri-state	<b>B</b> = B-version		
	<b>F</b> = -10° / +70°C	<b>0.14</b> = ±0.14 ppm				
	<b>K</b> = -40° / +85°C	<b>0.20</b> = ±0.20 ppm				
		<b>0.28</b> = ±0.28 ppm				
		<b>0.37</b> = ±0.37 ppm				
		<b>0.50</b> = ±0.50 ppm				

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

## OUTLINE DIMENSIONS



<b>Pin Connections</b>	#1 : NC	#2 : NC	#3 : NC	#4 : GND	#5 : Output
	#6 : NC	#7 : NC	#8 : E/D	#9 : Vdd	#10 : Control voltage



<b>Pin Connections</b>	#1 : Control voltage	#2 : GND	#3 : Output	#4 : Vdd
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