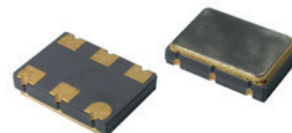


# SX7CQV HCMOS SURFACE MOUNT VOLTAGE CONTROLLED CRYSTAL CLOCK OSCILLATOR

## FEATURES

- SMD package
- Phase jitter less then 0.6 ps
- Tri-state function
- Applications: Optical, SONET, xDSL, SDH, ...

7.0 x 5.0 x 1.8 mm



Item	Specification	
Frequency Range	50.0 MHz ~ 245.0 MHz	
Output Logic	CMOS	
Overall Frequency Stability *	± 20 ppm ~ ± 100 ppm (see options)	
Operating Temperature Range	0 ~ +70 °C commercial application (see options) -40 ~ +85 °C industrial application (see options)	
Supply Voltage Vdd	+2.5 V ±5%	+3.3 V ±10%
Supply Voltage Center	+1.25 V	+1.65 V
Control Voltage Range	0.2 V to 2.3 V	0.3 V to 3.0 V
Supply Current Idd	40 mA max ( depends of frequency )	
Output Level	VOH ≥ 0.9 Vdd	VOL ≤ 0.1 Vdd
Output Load	15 pF	
Symmetry	45 / 55 %	
Rise Time / Fall Time Fr / Ff	3.0 ns max.	
Tri-state Function	pin #2 = high or open pin #2 = low	pin #4 ==> oscillation pin #4 ==> high impedance
Start-up Time	10 ms max.	
Integrated Phase Jitter (12 kHz to 20 MHz band)	0.6 ps typical	
Phase Noise (typical)	<b>Offset</b> 10 Hz 100 Hz 1 kHz 10kHz 100 kHz	<b>Freq. 122.880MHz</b> -68 dBc / Hz -99 dBc / Hz -115 dBc / Hz -125 dBc / Hz -130 dBc / Hz
Frequency Pulling Range	standard ±90 ppm min. ; ±100 ppm min. ; ±150 ppm min. ( see options )	
Linearity	6% typical ; 10% max.	
Slope Polarity	Positive (Increasing control voltage always increases output frequency)	
Modulation Bandwidth	10 kHz min. (-3 dB)	
Input Impedance	1MΩ typ.	
Packing Unit	1000pcs / reel	
Soldering Condition	260 °C, 10 sec x2 max	
	<b>Customer specifications on request</b>	

(\* ) Includes initial tolerance @+25°C, stability over operating temperature, stability vs. load change, stability vs. supply change and one year aging

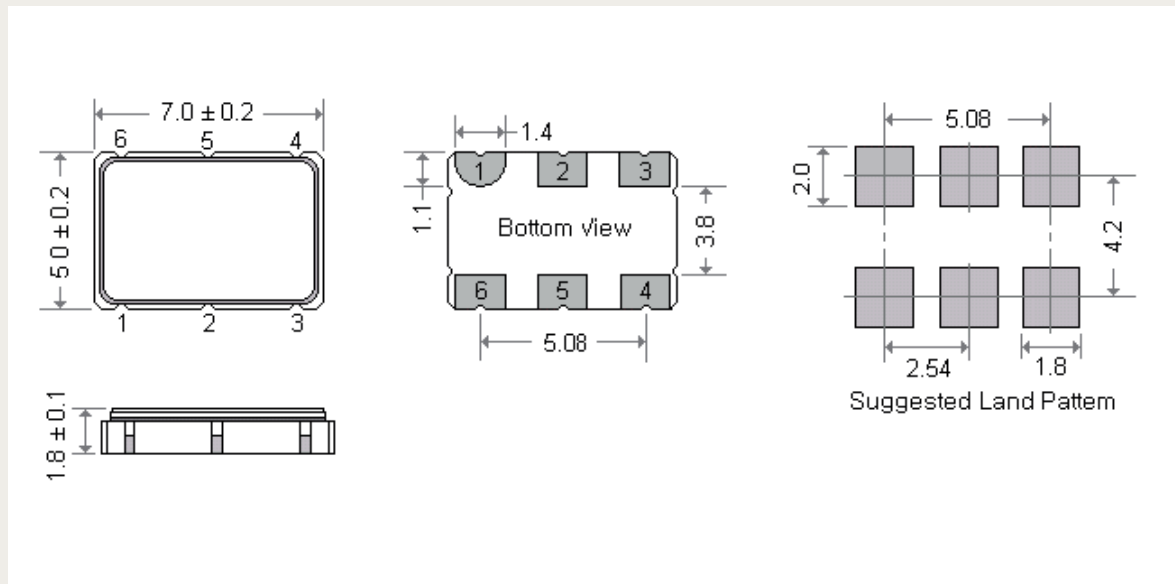
## OPTIONS & ORDERING INFORMATION

### SX7CQV

Supply Voltage *	Operating Temp. *	Overall Stability *	Tri-state Function	Package type	Pulling *	Frequency in MHz
25 = +2.5 V	E = 0° / +70°C	20 = ±20 ppm	E2 = Tri-state, pin #2	6P = 6-pad version	90 = ±90 ppm min.	Please specify the frequency in MHz
33 = +3.3 V	F = -20° / +70°C	25 = ±25 ppm	F = No Tri-state		100 = ±100 ppm min.	
	K = -40° / +85°C	30 = ±30 ppm 50 = ±50 ppm 100 = ±100 ppm			150 = ±150 ppm min.	

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

## OUTLINE DIMENSIONS



Pin Connections	#1 : Control Voltage	#2 : E/D or NC	#3 : GND
	#4 : Output	#5 : NC	#6 : Vdd