



## SMD Voltage Controlled Crystal Oscillator

High Performance VCXO in a 7 x 5 mm Surface Mount package with selectable output frequency

The SMK70501VCCS selectable VCXO combines low RMS phase jitter and low power with the ability to select the output frequency from up to four factory-configured frequencies by controlling two Frequency Select (FS) pins (e.g. 122.88 or 153.6 MHz). This enables reductions in part count and built-in upgrade paths to increase design flexibility and reduce costs

### Applications

Base stations  
Consumer Communications  
DSL/ADSL  
Ethernet  
Wi-Fi  
WiMAX/W-LAN

### Features

Selectable output frequencies (Up to 4)  
Low power differential outputs  
<1ps integrated RMS phase jitter (12 kHz to 20 MHz)  
Wide frequency range  
CMOS, LVPECL, LVDS, or HCSL output options  
Fast sample turnaround

### Specification for electrical appliances

Parameter	3.3V		Unit
	MIN	MAX	
Supply Voltage(VDD) 5%	3.135	4.465	V
Frequency Range	8	1500	MHz
Frequency Stability	±25	±50	ppm
Supply Current /For LVPECL		65	mA
Absolute Pull Range	±50		ppm
Total Pull Range: Frequency shift from minimum to maximum control voltage	50	250	ppm
Control Voltage: Nominal 1.65V	0	3.3	V
Modulation BW Control voltage 0.3 to 3V	10		kHz
Linearity Control voltage 0.3 to 3V		10	%
Input Impedance	0.1		MΩ
RMS Phase Jitter : Typical integrated 12kHz to 20MHz	0.4	1	ps
Rise Time / Fall Time 80%/20%		0.6	ns
Duty Cycle	48	52	%
SSB PHASE NOISE:25°C	77.76	155.52	MHz
10Hz	-68	-62	dBc/Hz
100Hz	-95	-90	
1KHz	-120	-112	
10KHz	-125	-118	
100 kHz	-128	-120	
Storage Temperature Range	-55	125	°C
Storage Temp. Range	-40	85	°C

Specifications subject to change without notice



7.0\*5.0\*1.6mm



### MANUFACTURING INFORMATION

Line Parameter	Description
Packaging Description	Tape and reel. Standard packing quantity is 2000 per reel
Reflow	Solder reflow process as per attached profile

### ENVIRONMENTAL SPECIFICATIONS

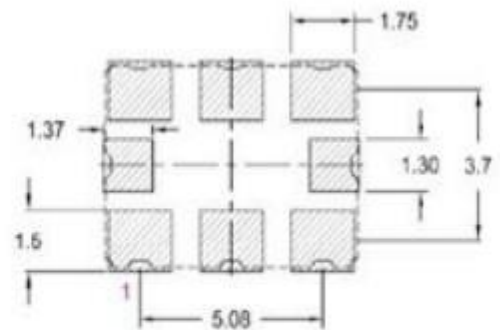
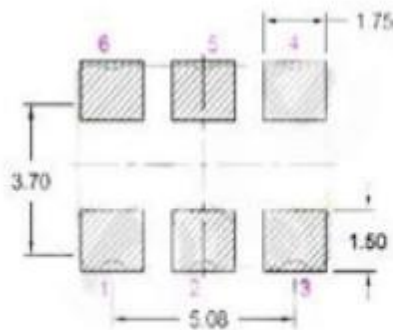
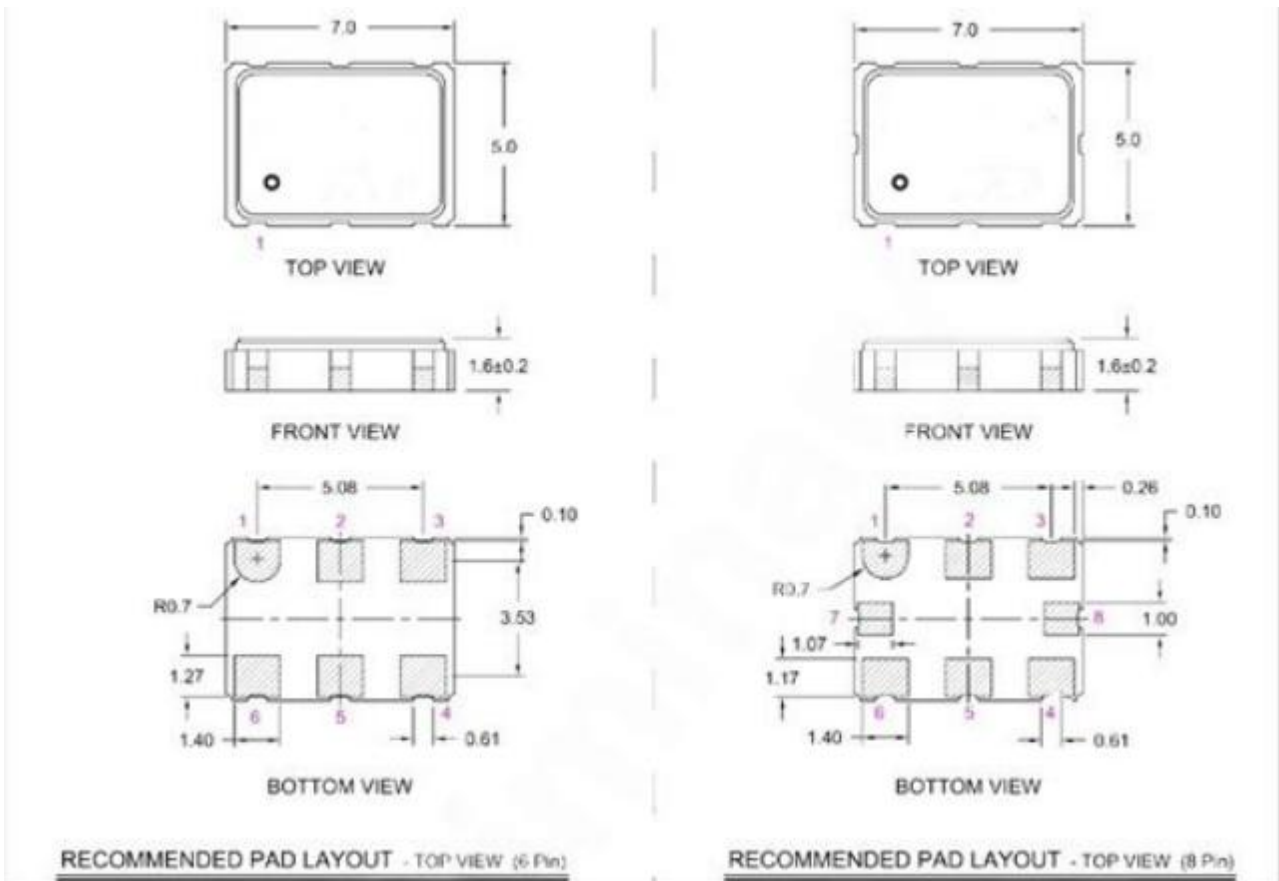
Line Parameter:	Description
Mechanical Shock:	MIL-STD-883, Method 2002
Storage Temperature: range	-55 to 125 °C
Humidity :	After 48 hours at 85 °C ± 2 °C 85% relative humidity non-condensing
Thermal Shock:	MIL-STD-883, Method 1011
Vibration:	MIL-STD-883, Method 2007
Gross and Fine Leak:	MIL-STD-883, Method 1014
RoHS Compliant:	Yes

### PIN CONNECTIONS

Line Parameter	Description
Pin 1	VCO
Pin 2	E/D* or NC
Pin 3	GND
Pin 4	OUTPUT
Pin 5	COMPLIMENTARY OUTPUT (LVPECL/LVDS only) or NC
Pin 6	VDD
Output Enabled	>70% of VDD on E/D pin, or E/D pin left open (connected to internal pull-up resistor)
Output Disabled	<30% of VDD on E/D pin, or E/D pin to GND Total frequency pull depends on resonator frequency used



**DIMENSION (mm)**



**NOTE:**

1. PIN CONNECTIONS ARE DETAILED IN THE SPECIFICATION.
2. MARKING INFORMATION IS DETAILED IN THE SPECIFICATION.