



SMD Voltage Controlled Crystal Oscillator

High performance VCXO in 7.0 x 5.0 mm Surface Mount Package

Product description

The SMK7050VCCS VCXO combines low RMS phase jitter and low supply current in an industry standard 7.0 x 5.0 mm SMD package.

Available in hundreds

of industry standard frequencies from 8 to 800 MHz for fast delivery and reduced inventory levels.

Applications

Basestation
Communications
Ethernet
Consumer Products
SONET/SDH
WiMAX/WLAN

Features

0.5 ps integrated RMS phase jitter (12 kHz to 20 MHz)
Fast sample turnaround available
LVCMOS, LVPECL, or LVDS Output options
Wide frequency range
Low power differential outputs

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	±30	---- ±50	ppm
Supply Current /For LVDS		30	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
Linearity Control voltage 0.3 to 3V		10	%
Modulation BW Control voltage 0.3 to 3V	10		kHz
Input Impedance	1		MΩ
Differential Output:Voltage Swing		350	mV
RMS Phase Jitter : Typical integrated 12kHz to 20MHz		0.5	ps
Rise Time / Fall Time 90%/10%		3	ns
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	
Duty Cycle	45	55	%
Storage Temperature Range	-55	125	°C
Storage Temp. Range	-40	85	°C

Specifications subject to change without notice



7.0*5.0*1.5mm



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

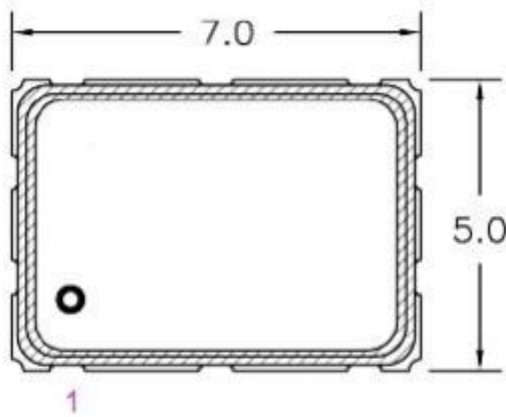
Line Parameter:	Description
Mechanical Shock:	MIL-STD-883, Method 2002
Storage Temperature: range	-55 to 125 °C
Humidity :	After 48 hours at 85 °C ± 2 °C 85% relative humidity non-condensing
Thermal Shock:	MIL-STD-883, Method 1011
Vibration:	MIL-STD-883, Method 2007
Gross and Fine Leak:	MIL-STD-883,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

PIN CONNECTIONS

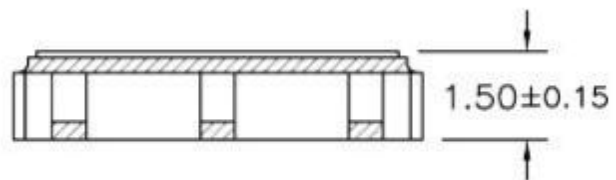
Line Parameter	Description
Pin 1	VCO
Pin 2	E/D* or NC
Pin 3	GND
Pin 4	OUTPUT
Pin 5	COMPLIMENTARY OUTPUT (LVPECL/LVDS only) or NC
Pin 6	VDD
Output Enabled	>70% of VDD on E/D pin, or E/D pin left open (connected to internal pull-up resistor)
Output Disabled	<30% of VDD on E/D pin, or E/D pin to GND Total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



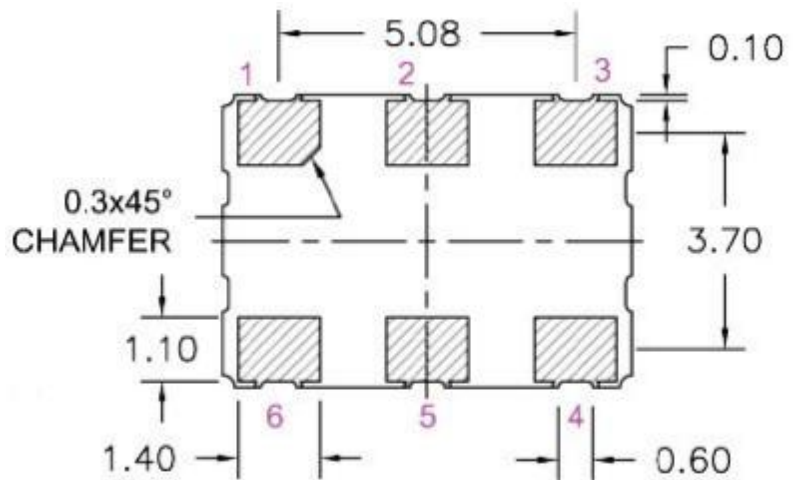
DIMENSION (mm)



TOP VIEW



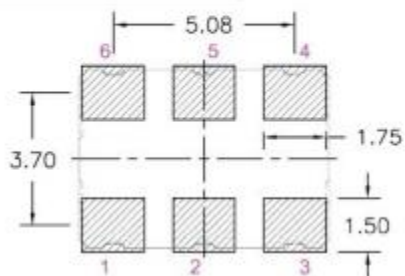
FRONT VIEW



BOTTOM VIEW

RECOMMENDED PAD LAYOUT

- TOP VIEW



NOTE:

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