



# Voltage Controlled SAW Oscillator

## Model CVS575



### Features

- 315MHz to 1GHz Available Freq. Range
- 5x7.5mm SMD Package
- Complementary LVPECL Output
- +3.3V Supply
- Ultra-Low Jitter <0.20 pSec RMS (50KHz to 80MHz)
- Ultra-Low Phase Noise -130dBc/Hz @ 10KHz offset
- CMOS Logic Enable/Disable

### Applications

- Frequency Translation
- Clock Smoothing (De-Jittering)
- SONET/SDH/ATM Networks
- OC-192
- General High Performance PLLs
- Test and Measurement

Crystek's Model CVS575 is a SAW based Voltage Controlled Oscillator (VCSO) designed for High Performance PLLs. It is an ideal choice for Telecommunication applications needing to meet Low Jitter generation requirements.

It is housed in the industry standard 5x7.5x2.5mm SMD package. The Enable/Disable function was designed to be used with CMOS logic levels for ease of interfacing. This means you don't need to convert to LVPECL logic to turn the Output ON and OFF.



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5x7.5mm SMD

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PERFORMANCE SPECIFICATION	MIN	TYP	MAX	UNITS
Nominal Frequency:		315-1000		MHz
Absolute Pulling Range (APR):	±50			ppm
Frequency Stability:		±150		ppm
Linearity:		±15		%
Tuning Sensitivity, Kv:		+275		ppm/V
Supply Current:		35		dBc/Hz
Output Phase Noise:				
@1KHz Offset		-108		dBc/Hz
@10KHz Offset		-130		dBc/Hz
@100KHz Offset		-138		dBc/Hz
@1MHz Offset		-140		dBc/Hz
@10MHz Offset		-142		dBc/Hz
Jitter:				
SONET OC-48 (12KHz-20MHz)		0.18	0.200	pS, RMS
SONET OC-192 (50KHz-80MHz)		0.12	0.150	pS,RMS
Rise/Fall Times, tr/TF (20%-80%):	100		240	pS
Output High Voltage, V <sub>OH</sub>	2.215		2.420	V
Output Low Voltage, V <sub>OL</sub>	1.470		1.745	V
Enable High Voltage, V <sub>IH</sub>			VCC	V
Disable Low Voltage, V <sub>IL</sub>	GND		0.8	V
Enable High Current, I <sub>IH</sub>			+150	uA
Enable Low Current, I <sub>IL</sub>			-150	uA
Duty Cycle:	45	50	55	%
Supply Voltage:	3.0	3.3	3.6	V
Supply Current, I <sub>CC</sub> (under Load Condition)		82		mA
Control Voltage:	0		3.3	V
Input Impedance:		100		Kohm
Input Modulation BW:		500		KHz
Operating Temperature Range:	-40		+85	°C
Storage Temperature Range:	-45		+90	°C

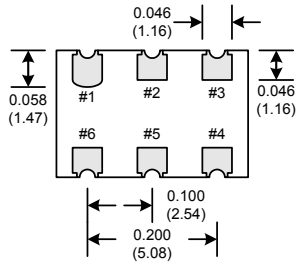
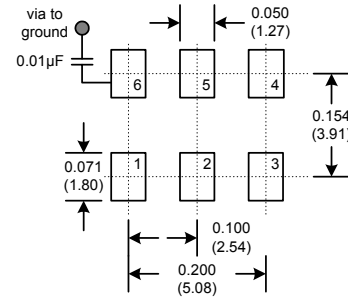
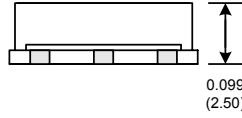
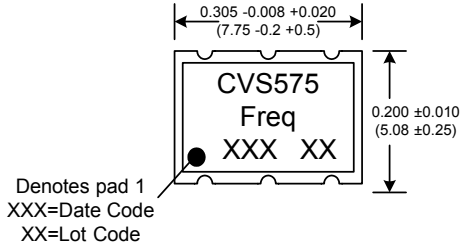


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5x7.5mm SMD

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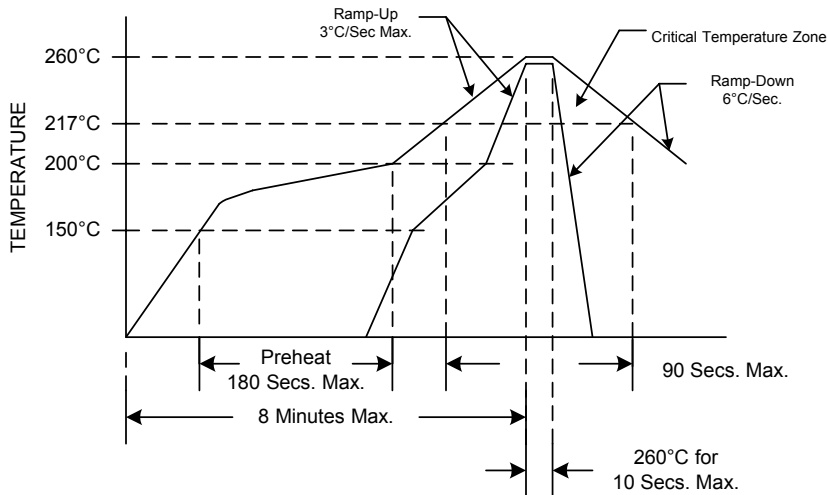
## SUGGESTED PAD LAYOUT



Pad	Connection
1	Volt Cont.
2	E/D
3	GND
4	OUT
5	COUT
6	Vdd

Dimensions inches (mm)  
All dimensions are Max unless otherwise specified.

## RECOMMENDED REFLOW SOLDERING PROFILE



## ENVIRONMENTAL COMPLIANCE

Parameter	Conditions
Mechanical Shock	MIL-STD-883, Method 2002
Mechanical Vibration	MIL-STD-883, Method 2007
Solderability	MIL-STD-883, Method 1014
Resistance to Solvents	MIL-STD-883, Method 2016

