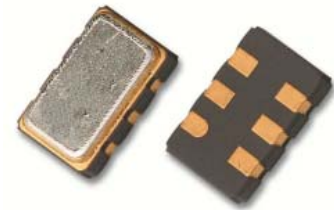


# CV5 Type 5.0 x 3.2 mm SMD Voltage Controlled Crystal Oscillator



### FEATURE

- Typical 5.0 x 3.2 x 1.2 mm 6 pads ceramic SMD package.
- Tight symmetry (45 to 55%) available.
- Tri-state enable/disable

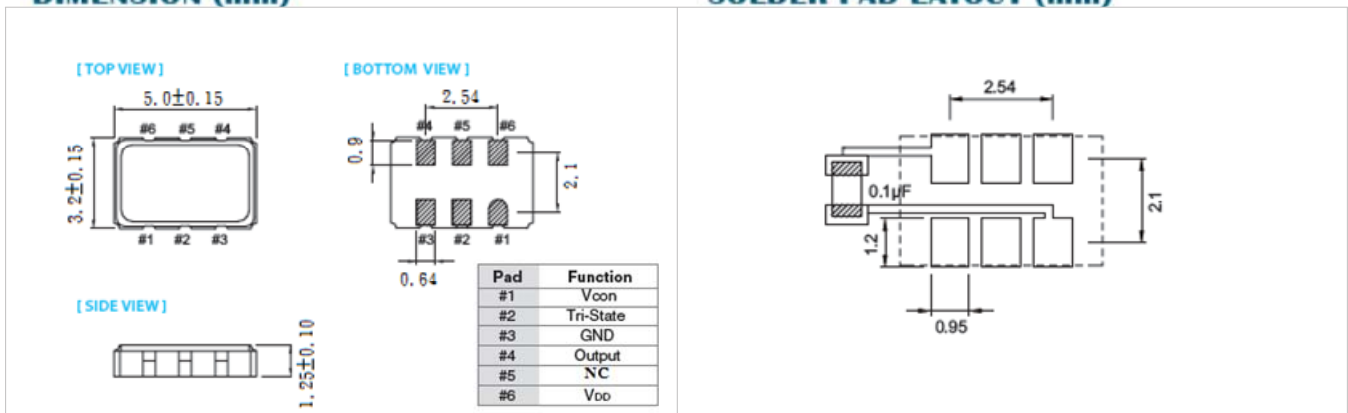
### TYPICAL APPLICATION

- Set-top Box, HDTV
- Wimax/WLAN
- xDSL/ VoIP, Cable modem

RoHS Compliant Standard

### DIMENSION (mm)

### SOLDER PAD LAYOUT (mm)



### ELECTRICAL SPECIFICATION

Parameter	5.0V		3.3V		Unit
	Min.	Max.	Min.	Max.	
Supply Voltage Variation (VDD) 10%	4.5	5.5	2.97	3.63	V
Frequency Range	1.5	80	1.5	80	MHz
Standard Frequency	19.44,38.4				
Absolute Pulling Range (APR)	±50	-	±50	-	ppm
Control Voltage Range	0.5	4.5	0.3	3.0	V
Supply Current	1.5MHz ≤ F0 < 20 MHz	15	-	10	mA
	20MHz ≤ F0 < 50 MHz	30	-	20	
	50MHz ≤ F0 ≤ 80 MHz	35	-	30	
Output Level	Output High (Logic "1")	90%VDD	90%VDD	-	V
	Output Low (Logic "0")	10%VDD	-	10%VDD	
Transition Time : Rise/ Fall Time <sup>+</sup>	1.5MHz ≤ F0 < 20 MHz	4	-	5	nSec
	20MHz ≤ F0 < 50 MHz	3	-	4	
	50MHz ≤ F0 ≤ 80 MHz	2	-	3	
Start Time	-	5	-	5	mSec
Tri-State(Input to Pin 2)	Enable(High voltage or floating)	0.7VDD	-	0.7VDD	V
	Disable(Low voltage or GND)	-	0.3VDD	-	
Linearity	-	10	-	10	%
Modulation Bandwidth (BW)	1.5MHz ≤ F0 < 80 MHz	15	-	-	KHz
Input Impedance	2000	-	2000	-	KΩ
Absolute Period Jitter	-	40	-	40	pSec
RMS Phase Jitter (Integrated 12KHz~20MHz)	-	1	-	1	pSec
Phase Noise @38.4 MHz	100 Hz	-100	-	-100	dBc/Hz
	1 KHz	-130	-	-130	
	10 KHz	-140	-	-140	
Aging ( @25°C 1st year)	-	±3	-	±3	ppm
Storage Temp. Range	-55	125	-55	125	°C

**Series CV5**  
**SEAM SEALED OSCILLATOR 5X3.2MM SMD**



Standard frequencies are frequencies which the crystal has been designed and does not imply a stock position.  
+ Transition times are measured between 10% and 90% of VDD, with an output load of 15pF.  
Packing: Tape & Reel, 1000/2000/3000/5000pcs per Reel.

**FREQ. STABILITY vs. TEMP. RANGE**

Temp. (°C)	ppm	
	±25	±50
-10 ~ +60	○	○
-20 ~ +70	○	○
-40 ~ +85	△	○

\* ○: Available △: Conditional X: Not available

\* Inclusive of calibration @ 25 °C, operating temperature range, input voltage variation, load variation, aging (1<sup>st</sup> year), shock, and vibration

Specifications subject to change without notice