

VW Type

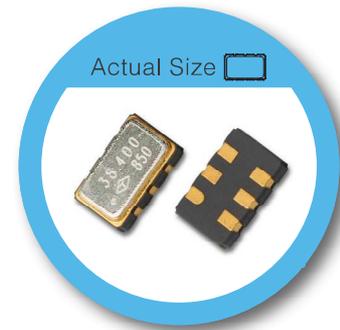
5.0 x 3.2mm SMD Voltage Controlled Crystal Oscillator

FEATURE

- Typical 5.0 x 3.2 x 1.25 mm 6 pads ceramic SMD package.
- Tight symmetry (45 to 55%) available.
- Tri-state enable/disable

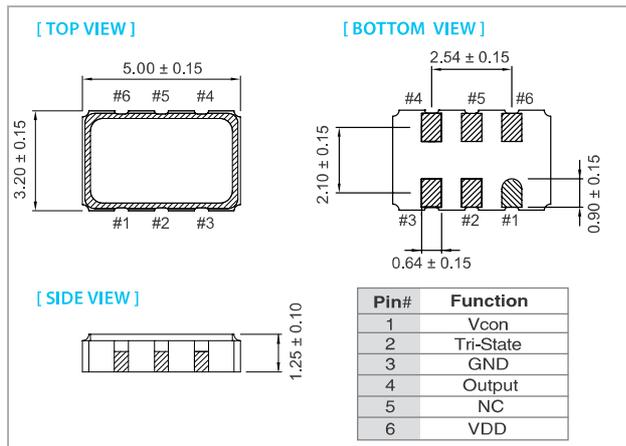
TYPICAL APPLICATION

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

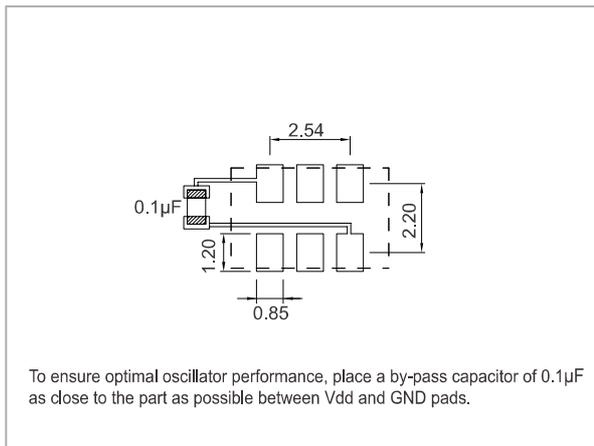


RoHS Compliant

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	125	1.5	170	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	1.5 MHz ≤ Fo < 20 MHz		-		mA
	20 MHz ≤ Fo < 50 MHz		-		
	50 MHz ≤ Fo ≤ 170 MHz		-		
Output Level	Output High (Logic"1")		2.97		V
	Output Low (Logic"0")		0.99		
Transition Time: Rise/Fall Time ⁺	1.5 MHz ≤ Fo < 20 MHz		-		nSec
	20 MHz ≤ Fo < 50 MHz		-		
	50 MHz ≤ Fo ≤ 170 MHz		-		
Start Time	-		5		mSec
Tri-State (input to Pin 2)	Enable (High voltage or floating)		2.31		V
	Disable (Low voltage or GND)		0.99		
Linearity	-		10		%
Modulation Bandwidth (BW)	1.5 MHz ≤ Fo ≤ 170 MHz		-		kHz
Input Impedance	5000		5000		kΩ
Period Jitter (Pk-Pk)	-		40		pSec
RMS Phase Jitter (Integrated 12 kHz ~ 20 MHz)	-		1		pSec
Phase Noise@38.4 MHz	100 Hz		-100		dBc/Hz
	1 kHz		-133		
	10 kHz		-140		
Aging (@ 25°C 1st year)	-		±3		ppm
Storage Temp. Range	-55		125		°C

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.

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 (1st year), shock, and vibration

Note: not all combination of options are available. Other specifications may be available upon request.

Rev(6)04/2015

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Specifications subject to change without notice.