

# VW Type

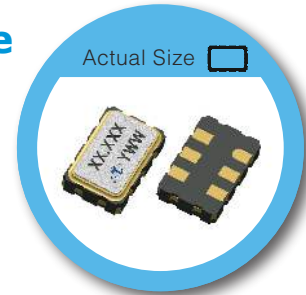
## 5.0 x 3.2mm SMD LVPECL/LVDS Voltage Controlled Crystal Oscillator

### 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

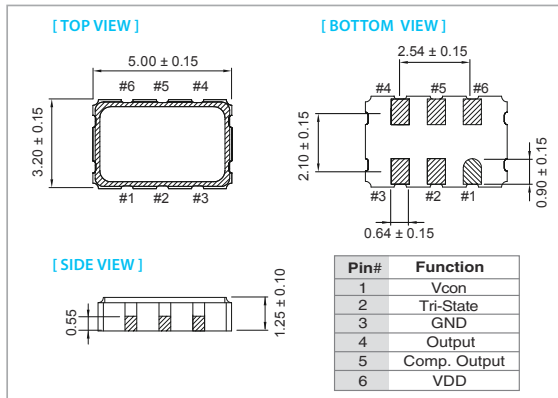
### TYPICAL APPLICATION

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

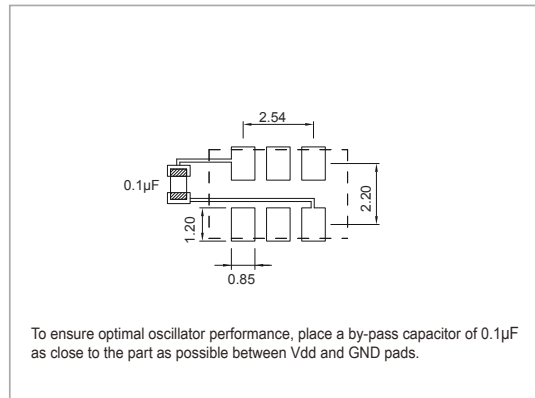


RoHS Compliant

### DIMENSION (mm)



### SOLDER PAD LAYOUT (mm)



### ELECTRICAL SPECIFICATION

Parameter	LVPECL 3.3 V		LVDS 3.3 V		unit
	Min.	Max.	Min.	Max.	
Supply Voltage Variation (VDD)	VDD-5%	VDD+5%	VDD-5%	VDD+5%	V
Frequency Range	30	250	30	250	MHz
Standard Frequency	122.88, 153.6, 155.52, 156.25				
Absolute Pulling Range (APR)	±50	—	±50	—	ppm
Control Voltage Range	0.3	3.0	0.3	3.0	V
Supply Current 30 MHz ≤ Fo ≤ 250 MHz	100		75		mA
Output Level					
Output High (Logic "1")	2.275	—	—	1.6	V
Output Low (Logic "0")	—	1.68	0.9	—	
Transition Time: Rise/Fall Time*	—	1.0	—	1.0	nSec
Start Time	—	3	—	3	mSec
Tri-State (input to Pin 2)					
Enable (High voltage or floating)	2.31	—	2.31	—	V
Disable (Low voltage or GND)	—	0.99	—	0.99	
Linearity	—	10	—	10	%
Modulation Bandwidth (BW)	20	—	20	—	kHz
Input Impedance	10000	—	10000	—	KΩ
RMS Phase Jitter					
Fo < 100 MHz	—	1.0	—	1.0	pSec
100 MHz ≤ Fo < 125 MHz	—	0.7	—	0.7	
125 MHz ≤ Fo < 150 MHz	—	0.5	—	0.5	
150 MHz ≤ Fo ≤ 250 MHz	—	0.3	—	0.3	
Phase Noise@122.88MHz					dBc/Hz
100 Hz	—	-105	—	-105	
1 KHz	—	-128	—	-128	
10 KHz	—	-145	—	-145	
Aging (@ 25°C 1st year)	—	±3	—	±3	ppm
Storage Temp. Range	-55	125	-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 20% and 80% of VDD.

### 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

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