

# VW Type

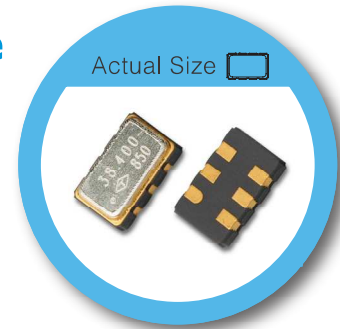
## 5.0 x 3.2mm SMD LVPECL/LVDS Voltage Controlled Crystal Oscillator

### 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

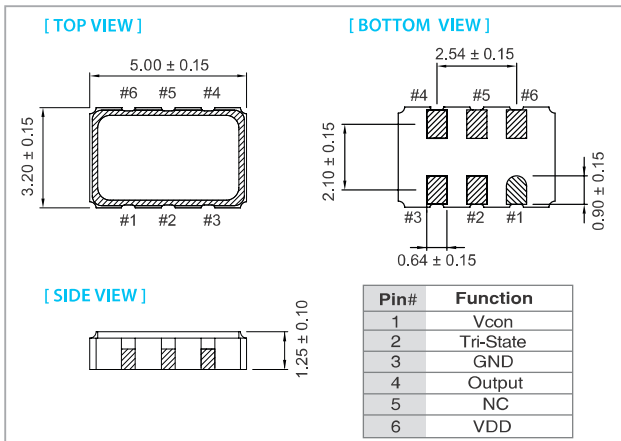
### TYPICAL APPLICATION

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

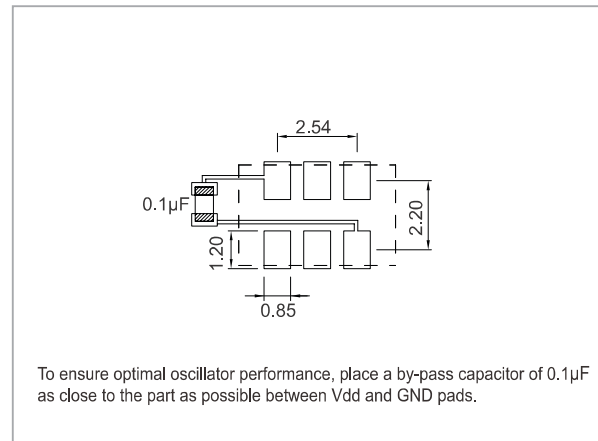


RoHS Compliant

### 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) ±5%	3.135	3.465	3.135	3.465	V
Frequency Range	20	200	20	175	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 20 MHz ≤ Fo ≤ 200 MHz	—	100	—	75	mA
<b>Output Level</b>					
Output High (Logic "1")	2.275	—	—	1.6	V
Output Low (Logic "0")	—	1.68	0.9	—	
Transition Time: Rise/Fall Time <sup>+</sup>	—	1.0	—	1.0	nSec
Start Time	—	3	—	3	mSec
<b>Tri-State (input to Pin 2)</b>					
Enable (High voltage or floating)	2.31	—	2.31	—	V
Disable (Low voltage or GND)	—	0.99	—	0.99	
<b>Linearity</b>	—	10	—	10	%
Modulation Bandwidth (BW)	20	—	20	—	kHz
Input Impedance	5000	—	5000	—	KΩ
<b>RMS Phase Jitter</b>					
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 ≤ 200 MHz	—	0.3	—	0.3	
<b>Phase Noise@122.88MHz</b>	100 Hz		-105		dBc/Hz
	1 KHz		-128		
	10 KHz		-145		
<b>Aging (@ 25°C 1st year)</b>	—	±3	—	±3	ppm
<b>Storage Temp. Range</b>	-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

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