VW Type
5.0 x 3.2mm SMD LVPECL/LVDS Voltage Controlled Crystal Oscillator
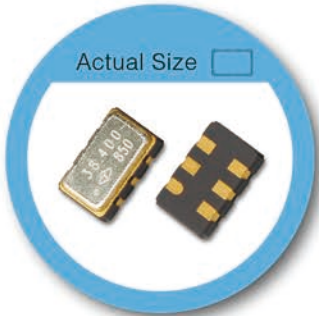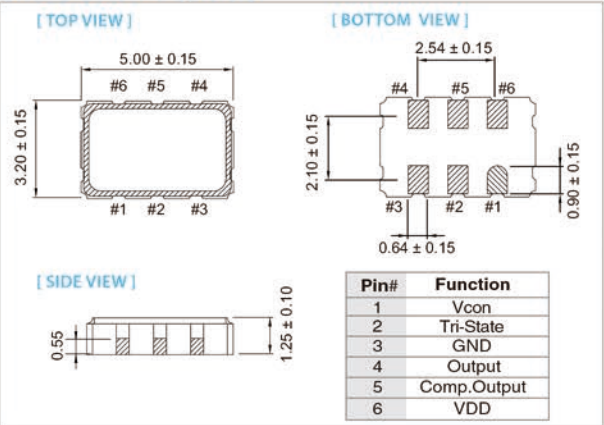
Actual Size ☐

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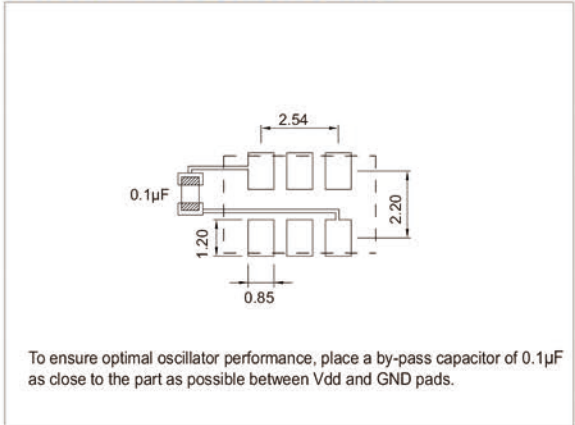- Tri-state enable/disable

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

RoHS Compliant

DIMENSION (mm)

[TOP VIEW]
5.00 ± 0.15
#6 #5 #4
3.20 ± 0.15
#1 #2 #3

[BOTTOM VIEW]
2.54 ± 0.15
#4 #5 #6
2.10 ± 0.15
0.90 ± 0.15
#3 #2 #1
0.64 ± 0.15

[SIDE VIEW]
0.55
1.25 ± 0.10

Pin#	Function
1	Vcon
2	Tri-State
3	GND
4	Output
5	Comp.Output
6	VDD

SOLDER PAD LAYOUT (mm)

2.54
2.20
0.1µF
1.20
0.85

To ensure optimal oscillator performance, place a by-pass capacitor of 0.1µF as close to the part as possible between Vdd and GND pads.

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 100 Hz	-105		-105		dBc/Hz
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	X	○

* ○: 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.

Specifications subject to change without notice.