

VT-M Type

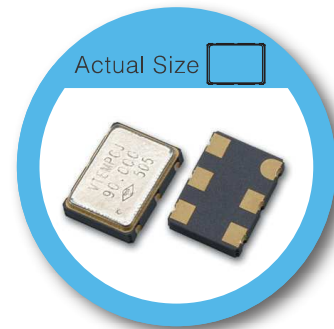
7.0 x 5.0 mm SMD Voltage Controlled Crystal Oscillator

FEATURE

- Typical 7.0 x 5.0 x 1.75 mm 6 pads ceramic SMD package.
- Tight symmetry (45 to 55%) available.
- Tri-state enable/disable

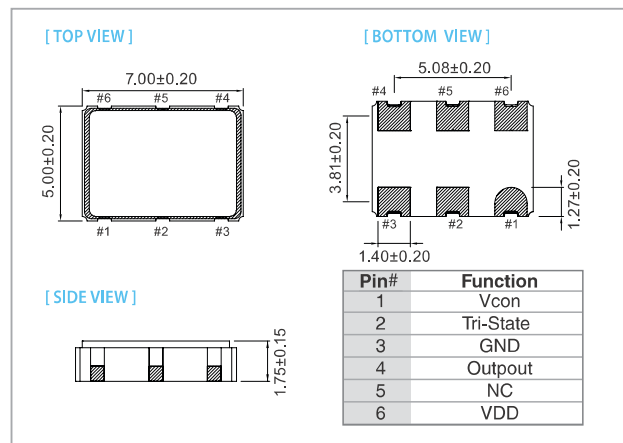
TYPICAL APPLICATION

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

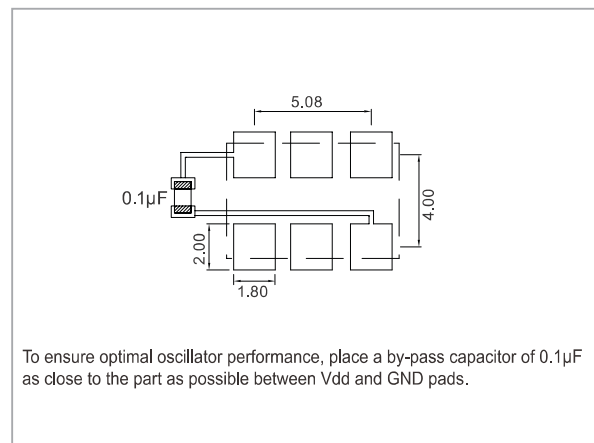


RoHS Compliant

DIMENSION (mm)



SOLDER PAD LAYOUT (mm)



ELECTRICAL SPECIFICATION

Parameter	3.3 V		Unit
	Min.	Max.	
Supply Voltage Variation (VDD) ±10%	2.97	3.63	V
Frequency Range	60	200	MHz
Absolute Pulling Range (APR)	±50	—	ppm
Control Voltage Range	0.3	3.0	V
Supply Current			
60 MHz ≤ Fo < 160 MHz	—	40	mA
160 MHz ≤ Fo ≤ 200 MHz	—	50	
Output Level (CMOS)			
Output High (Logic"1")	2.97	—	V
Output Low (Logic"0")	—	0.33	
Transition Time: Rise/Fall Time+			
60 MHz ≤ Fo ≤ 200 MHz	—	2	nSec
Start Time	—	2	mSec
Tri-State (Input to Pin 2)			
Enable (High voltage or floating)	2.31	—	V
Disable (Low voltage or GND)	—	0.99	
Period Jitter (Pk-Pk)	—	150	pSec
RMS Phase Jitter (Integrated 12kHz~20MHz)	—	4	pSec
Linearity	—	10	%
Modulation Bandwidth (BW)	25	—	kHz
Input Impedance	2000	—	kΩ
Phase Noise@155.52MHz			dBc/Hz
100 Hz	—	-75	
1 kHz	—	-105	
10 kHz	—	-125	
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.