Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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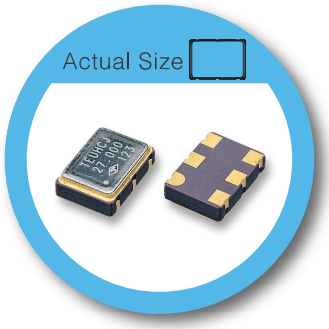
TAITIEN
Our Performance, Your Reputation

VT Type
7.0 x 5.0 mm SMD Voltage Controlled Crystal Oscillator

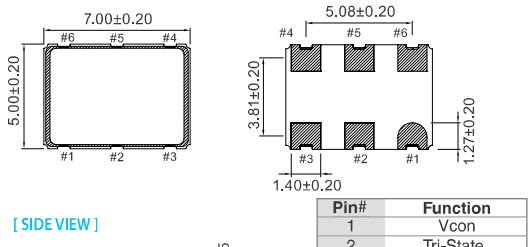


RoHS Compliant

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

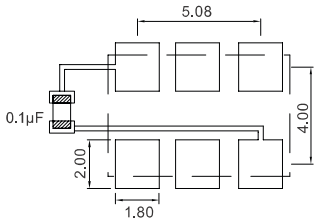
TYPICAL APPLICATION
- Set-top Box, HDTV
- WiMAX/WLAN
- xDSL/ VoIP, Cable modem

DIMENSION (mm)



Pin#	Function
1	Vcon
2	Tri-State
3	GND
4	Outpout
5	NC
6	VDD

SOLDER PAD LAYOUT (mm)



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		3.3 V Min.	3.3 V Max.	Unit
Supply Voltage Variation (VDD)		VDD-5%	VDD+5%	V
Frequency Range		1.5	170	MHz
Standard Frequency		10,20,25,27,32.768,35.328,38.88,61.44,122.88, 153.6		
Absolute Pulling Range (APR)		±50	–	ppm
Control Voltage Range		0.3	3.0	V
Supply Current	1.5 MHz ≦ Fo < 20 MHz	–	10	mA
	20 MHz ≦ Fo < 50 MHz	–	20	
	50 MHz ≦ Fo ≦ 80 MHz	–	30	
	80 MHz < Fo < 160 MHz	–	40	
	160 MHz ≦ Fo ≦ 170 MHz	–	50	
Output Level (CMOS)				
	Output High (Logic"1")	2.97	–	V
	Output Low (Logic"0")	–	0.33	
Transition Time: Rise/Fall Time+				
	1.5 MHz ≦ Fo < 20 MHz	–	5	nSec
	20 MHz ≦ Fo < 50 MHz	–	4	
	50 MHz ≦ Fo ≦ 80 MHz	–	3	
	80 MHz < Fo ≦ 170 MHz	–	2	
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	
Period Jitter (Pk-Pk)		–	40	pSec
RMS Phase Jitter (Integrated 12kHz~20MHz)		–	1	pSec
Linearity		–	10	%
Modulation Bandwidth (BW)				
	1.5 MHz ≦ Fo ≦ 170 MHz	15	–	kHz
Input Impedance				
	1.5 MHz ≦ Fo ≦ 170 MHz	10000	–	kΩ
Phase Noise@30.72MHz	100 Hz	-115		dBc/Hz
	1 kHz	-135		
	10 kHz	-150		
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.