



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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TY Type

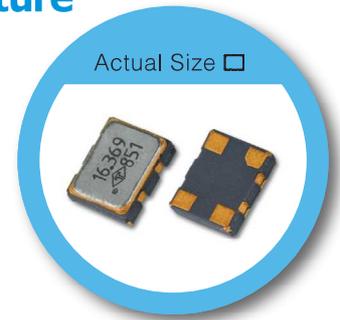
2.5 x 2.0 mm SMD Voltage Controlled Temperature Compensated Crystal Oscillator

FEATURE

- Typical 2.5 x 2.0 x 0.7 mm ceramic SMD package.
- For automatic assembly.
- Compactness and lightweight.
- VCTCXO available.
- Low thickness

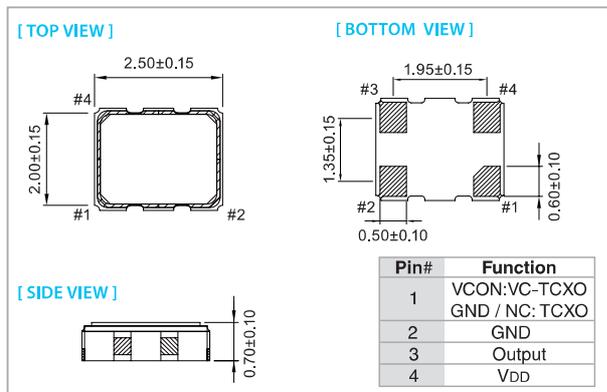
TYPICAL APPLICATION

- GPS
- WiMAX, WLAN
- Mobile Phone

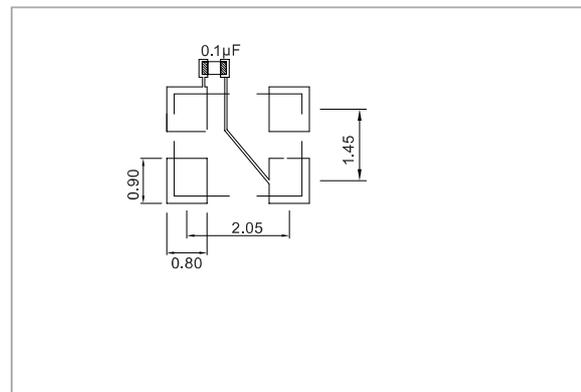


RoHS Compliant

DIMENSION (mm)



SOLDER PAD LAYOUT (mm)



ELECTRICAL SPECIFICATION

Parameter	3.3 / 3.0 / 2.8 V		2.5 V		1.8 V		Unit
	Min.	Max.	Min.	Max.	Min.	Max.	
Supply Voltage Variation (VDD)	VDD-5%	VDD+5%	VDD-5%	VDD+5%	VDD-5%	VDD+5%	V
Frequency Range	10	52	10	52	10	52	MHz
Standard Frequency	16.369, 19.2, 26.0, 38.4						
Frequency Tolerance*	-	±2.0	-	±2.0	-	±2.0	ppm
Frequency stability							ppm
Vs Supply Voltage (±5%) change	-	±0.2	-	±0.2	-	±0.2	
Vs Load (±10%) change	-	±0.2	-	±0.2	-	±0.2	
Vs Aging (@ 1st year)	-	±1.0	-	±1.0	-	±1.0	ppm
Supply Current 10 MHz ≤ Fo ≤ 26 MHz	-	1.5	-	1.5	-	1.5	mA
26 MHz < Fo ≤ 52 MHz	-	2.0	-	2.0	-	2.0	
Output Level (Clipped sine wave)	0.8	-	0.8	-	0.8	-	Vp-p
Load	10 KΩ // 10pF		10 KΩ // 10pF		10 KΩ // 10pF		
Control Voltage Range (VCTCXO)	0.5	2.5	0.4	2.4	0.3	1.5	V
Pulling Range (VCTCXO)	±5.0	-	±5.0	-	±5.0	-	ppm
Vc Input Impedance (VCTCXO)	500	-	500	-	500	-	kΩ
Phase Noise @ 19.2 MHz	100 Hz		-115		-115		dBc/Hz
	1 kHz		-135		-135		
	10 kHz		-148		-148		
Start time	-	2	-	2	-	2	mSec
Storage Temp. Range	-55	125	-55	125	-55	125	°C

Standard frequencies are frequencies which the crystal has been designed and does not imply a stock position.

* Frequency at 25°C, 1 hour after reflow.

FREQ. STABILITY vs. TEMP. RANGE

Temp. (°C)	ppm	±0.5	±1.0	±1.5	±2.0	±2.5
-20 ~ +70		○	○	○	○	○
-30 ~ +85		○	○	○	○	○
-40 ~ +85		○	○	○	○	○

* ○: Available △: Conditional X: Not available

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

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