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!

Contact us

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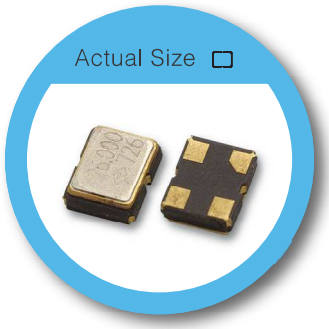
PY Type
2.5 x 2.0 mm SMD Crystal Oscillator

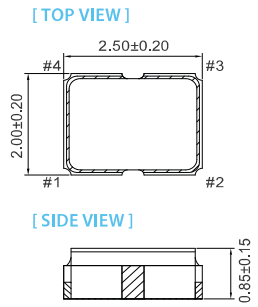


RoHS Compliant

FEATURE
- Typical 2.5 x 2.0 x 0.85 mm ceramic SMD package.
- Tight symmetry (45 to 55%) available.
- Operation voltage: 1.8V, 2.5V, 3.3V
- Tri-state enable/disable

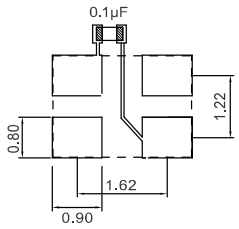
TYPICAL APPLICATION
- Computer Peripherals
- Set-top Box , HDTV
- DSC, PDA

DIMENSION (mm)



Pin#	Function
1	Tri-State
2	GND
3	Output
4	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		2.5 V		1.8 V		unit
	Min.	Max.	Min.	Max.	Min.	Max.	
Supply Voltage Variation (V_{DD})	VDD-10%	VDD+10%	VDD-10%	VDD+10%	VDD-10%	VDD+10%	V
Frequency Range	2.048	200	2.048	166	2.048	110	MHz
Standard Frequency	24, 26, 40						
V_{DD} Sensitivity (±10 %)	-2	2	-2	2	-2	2	ppm
Supply Current							
2.048 MHz ≦ Fo < 30 MHz	–	10	–	8	–	6	mA
30 MHz ≦ Fo < 75 MHz	–	15	–	10	–	8	
75 MHz ≦ Fo < 133 MHz	–	20	–	15	–	12	
133 MHz ≦ Fo < 166 MHz	–	22	–	15	–	–	
166 MHz ≦ Fo ≦ 200 MHz	–	25	–	–	–	–	
Duty Cycle	45	55	45	55	45	55	%
Output Level (CMOS) Output High (Logic "1")	2.97	–	2.25	–	1.62	–	V
Output Low (Logic "0")	–	0.33	–	0.25	–	0.18	
Transition Time:Rise/Fall Time+							
2.048 MHz ≦ Fo < 10 MHz	–	3	–	4	–	5	nSec
10 MHz ≦ Fo	–	2	–	3	–	4	
Start Time	–	2	–	2	–	2	mSec
Tri-State(Input to Pin 1) Enable (High voltage or floating)	2.31	–	1.75	–	1.26	–	V
Disable (Low voltage or GND)	–	0.99	–	0.75	–	0.54	
Period Jitter(Pk-Pk)							
Specific Frequency"	–	40	–	40	–	40	pSec
Others	–	200	–	200	–	200	
Standby Current	–	15	–	15	–	15	µA
Aging (@ 25°C 1st year)	–	±3	–	±3	–	±3	ppm
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.
+ Transition times are measured between 10% and 90% of V_{DD}, with an output load of 15pF.
Specific frequncy including 4.0, 13.0, 22.0, 26.0, and 40.0MHz

FREQ. STABILITY vs. TEMP. RANGE

Temp.(°C) \ ppm	±20	±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.