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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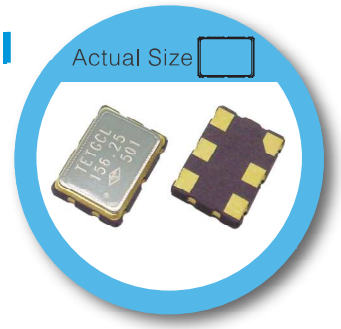
TAIWAN EXCELLENCE

TAITIEN
Our Performance, Your Reputation

OT Type
7.0 x 5.0 mm SMD LVPECL/LVDS Crystal Oscillator

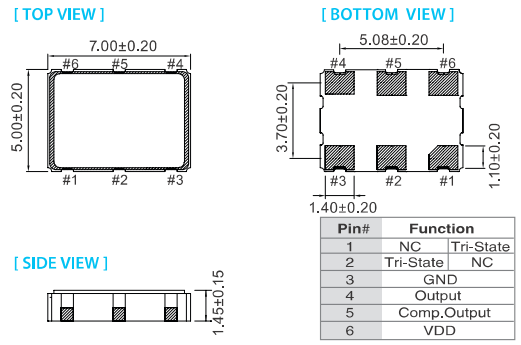


RoHS Compliant

FEATURE
- Typical 7.0 x 5.0 x 1.45 mm hermetically sealed ceramic package.
- Very low jitter performance: typical 0.3 pS RMS from 12k-20MHz.
- Fundamental/3rd overtone crystal design.
- Output frequency up to 320 MHz.
- Operating temperature up to 125°C
- Tri-state enable/disable

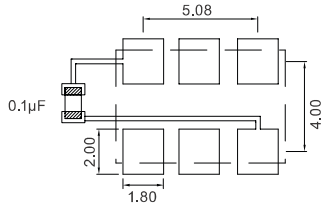
TYPICAL APPLICATION
- 10Gbit Ethernet, Fiber Channel, Storage Area Network, SONET
- Enterprise Servers, Reference clocks for ADC and DAC
- Telecom

DIMENSION (mm)



Pin#	Function	
1	NC	Tri-State
2	Tri-State	NC
3	GND	
4	Output	
5	Comp.Output	
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		LVPECL 3.3 V Min.	LVPECL 3.3 V Max.	LVPECL 2.5 V Min.	LVPECL 2.5 V Max.	LVDS 3.3 V Min.	LVDS 3.3 V Max.	LVDS 2.5 V Min.	LVDS 2.5 V Max.	unit
Supply Voltage Variation (V_{DD})		V_{DD}-5%	V_{DD}+5%	V_{DD}-5%	V_{DD}+5%	V_{DD}-5%	V_{DD}+5%	V_{DD}-5%	V_{DD}+5%	V
Frequency Range		10	320	10	320	10	320	10	320	MHz
Standard Frequency		77.76, 106.25, 125, 155.52, 156.25, 187.5, 212.5, 312.5								
Supply Current	10 MHz ≦ Fo < 160 MHz	–	75	–	75	–	50	–	50	mA
	160 MHz ≦ Fo < 250 MHz	–	100	–	100	–	50	–	50	
	250 MHz ≦ Fo ≦ 320 MHz	–	100	–	100	–	65	–	65	
Output Level	Output High (Logic "1")	2.275	–	1.475	–	–	1.6	–	1.6	V
	Output Low (Logic "0")	–	1.68	–	0.88	0.9	–	0.9	–	
Transition Time: Rise/Fall Time+		–	1.0	–	1.0	–	1.0	–	1.0	nSec
Start Time		–	2	–	2	–	2	–	2	mSec
Tri-State(Input to Pin 2 or Pin 1)										
	Enable (High voltage or floating)	2.31	–	1.75	–	2.31	–	1.75	–	V
	Disable (Low voltage or GND)	–	0.99	–	0.75	–	0.99	–	0.75	
RMS Phase Jitter (Integrated 12 KHz ~ 20 MHz)										
	Fo < 80 MHz	–	1	–	1	–	1	–	1	pSec
	80 MHz ≦ Fo <125 MHz	–	0.5	–	0.5	–	0.5	–	0.5	
	125 MHz ≦ Fo <170 MHz	–	0.3	–	0.3	–	0.3	–	0.3	
	170 MHz ≦ Fo <200 MHz	–	0.5	–	0.5	–	0.5	–	0.5	
	200 MHz ≦ Fo	–	0.3	–	0.3	–	0.3	–	0.3	
Phase Noise @ 156.25 MHz	100Hz	-100		-100		-100		-100		dBc/Hz
	1 kHz	-130		-130		-130		-130		
	10 kHz	-145		-145		-145		-145		
Aging (@ 25°C 1st year)		–	±3	–	±3	–	±3	–	±3	ppm
Storage Temp. Range		-55	125	-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 20% and 80% of V_{DD}.

FREQ. STABILITY vs. TEMP. RANGE

Temp. (°C) \ ppm	±25	±50
-10 ~ +60	○	○
-20 ~ +70	○	○
-40 ~ +85	△	○
-40 ~ +125	×	○

* ○: 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.