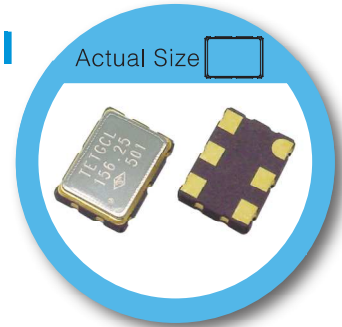


# OT Type 7.0 x 5.0 mm SMD LVPECL/LVDS Crystal Oscillator



RoHS Compliant

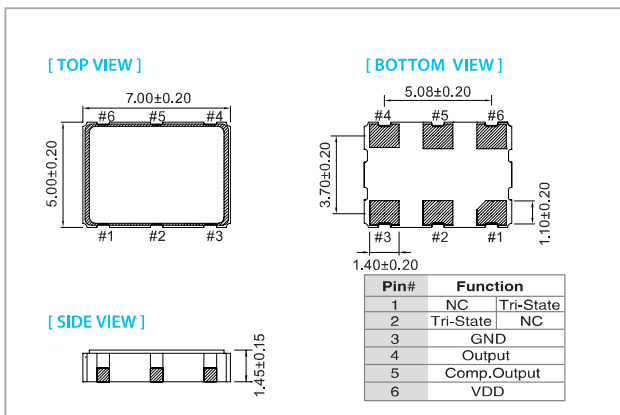
## FEATURE

- 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.
- Tri-state enable/disable

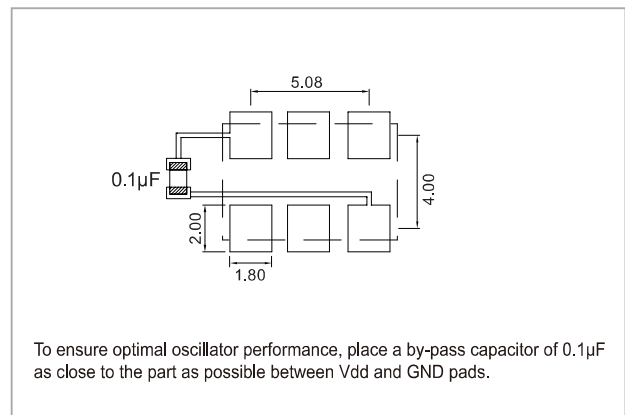
## TYPICAL APPLICATION

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

## DIMENSION (mm)



## SOLDER PAD LAYOUT (mm)



## ELECTRICAL SPECIFICATION

Parameter	LVPECL				LVDS				unit
	3.3 V		2.5 V		3.3 V		2.5 V		
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
Supply Voltage Variation (V <sub>DD</sub> ) ±5%	3.135	3.465	2.375	2.625	3.135	3.465	2.375	2.625	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		50		50		mA
	160 MHz ≤ Fo < 250 MHz		100		50		50		
	250 MHz ≤ Fo ≤ 320 MHz		100		65		65		
Output Level	Output High (Logic "1")		2.275		1.475		1.6		V
	Output Low (Logic "0")		1.68		0.88		0.9		
Transition Time: Rise/Fall Time <sup>+</sup>	1.0		1.0		1.0		1.0		nSec
Start Time	3		3		3		3		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		dBc/Hz
	1 kHz		-130		-130		-130		
	10 kHz		-145		-145		-145		
Aging (@ 25°C 1st year)	±3		±3		±3		±3		ppm
Storage Temp. Range	-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<sub>DD</sub>.

## 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 (1<sup>st</sup> year), shock, and vibration

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