

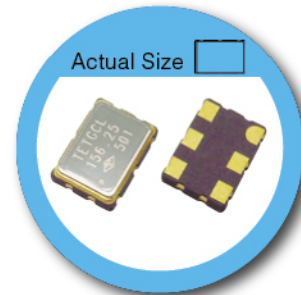
OT Type 7.0 x 5.0 mm SMD PECL/LVDS Crystal Oscillator

FEATURE

- Typical 7.0 x 5.0 x 1.5 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

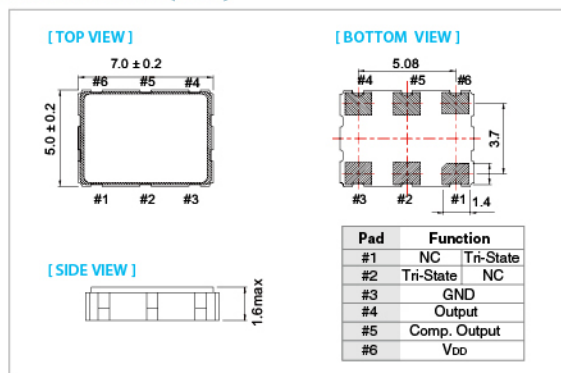
TYPICAL APPLICATION

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

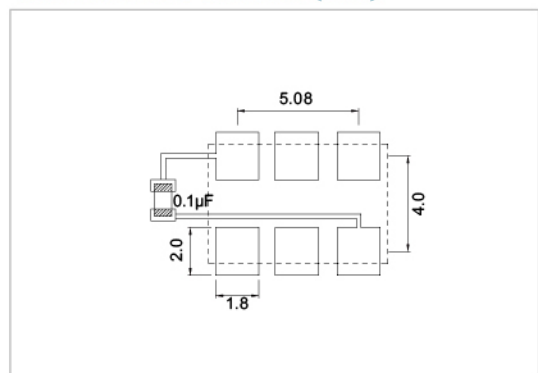


RoHS Compliant Standard

DIMENSION (mm)



SOLDER PAD LAYOUT (mm)



ELECTRICAL SPECIFICATION

Parameter		PECL				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 (VDD) 5%		3.135	3.465	2.375	2.625	3.135	3.465	2.375	2.625	V
Frequency Range		19.44	320	19.44	320	19.44	320	19.44	320	MHz
Standard Frequency		77.76, 106.25, 125, 155.52, 156.25, 187.5, 212.5, 312.5								
Supply Current	19.44 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	—	1.095	0.9	—	0.9	—	
Transition Time: Rise/Fall Time ⁺		—	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)		0.7 VDD	—	0.7 VDD	—	0.7 VDD	—	0.7 VDD	—	V
Disable (Low voltage or GND)		—	0.3 VDD	—	0.3 VDD	—	0.3 VDD	—	0.3 VDD	
RMS Phase Jitter (Integrated 12 KHz ~ 20 MHz)										
Fo < 80 MHz		—	1.4	—	1.4	—	1.4	—	1.4	pSec
80 MHz ≤ Fo <125 MHz		—	0.9	—	0.9	—	0.9	—	0.9	
125 MHz ≤ Fo <150 MHz		—	0.7	—	0.7	—	0.7	—	0.7	
150 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	100Hz	—	-70	—	-70	—	-70	—	-70	dBc/Hz
	1 KHz	—	-100	—	-100	—	-100	—	-100	
	10 KHz	—	-125	—	-125	—	-125	—	-125	
		—	±3	—	±3	—	±3	—	±3	
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 VDD.

Packing: Tape & Reel, 1000/3000pcs per Reel.

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