

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

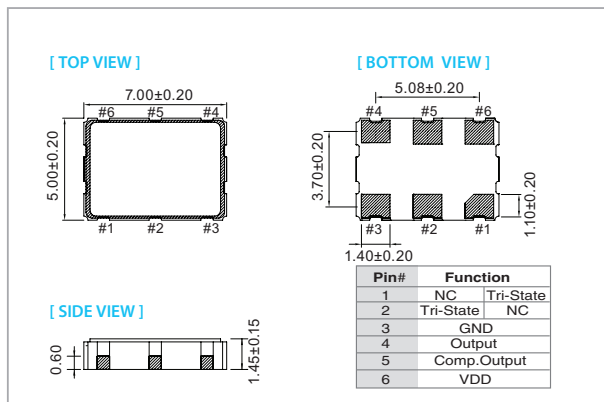
FEATURE

- 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

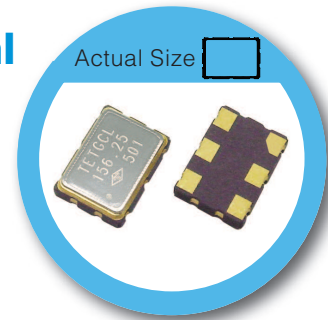
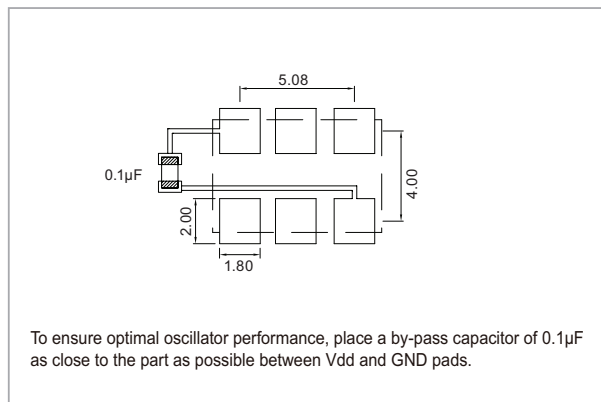
TYPICAL APPLICATION

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

DIMENSION (mm)



SOLDER PAD LAYOUT (mm)



RoHS Compliant

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 _{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 ≤ F _o < 160 MHz		-		75		-		50	mA	
	160 MHz ≤ F _o < 250 MHz		-		100		-		50		
	250 MHz ≤ F _o ≤ 320 MHz		-		100		-		65		
Output Level	Output High		2.275		-		1.475		-		V
	Output Low		-		1.68		-		0.88		
Transition Time: Rise/Fall Time ⁺	-		1.0		-		1.0		-		nSec
Start Time	-		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)											
F _o < 80 MHz	-	1	-	1	-	1	-	1	-	pSec	
80 MHz ≤ F _o < 125 MHz	-	0.5	-	0.5	-	0.5	-	0.5	-		
125 MHz ≤ F _o < 170 MHz	-	0.3	-	0.3	-	0.3	-	0.3	-		
170 MHz ≤ F _o < 200 MHz	-	0.5	-	0.5	-	0.5	-	0.5	-		
200 MHz ≤ F _o	-	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	-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.

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www.tai tien.com

sales@tai tien.com.tw