

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

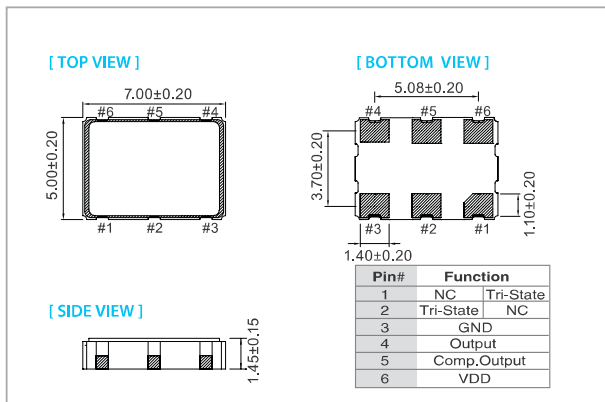
FEATURE

- 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

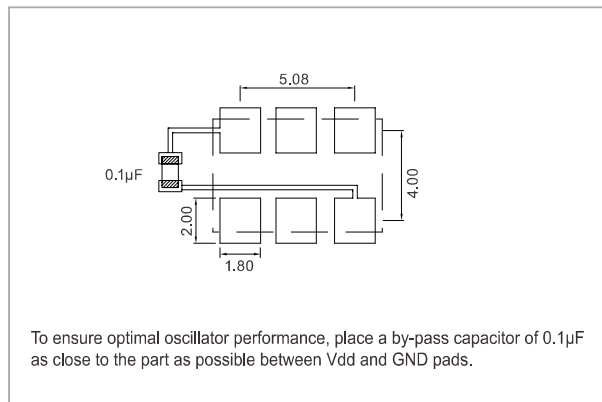
TYPICAL APPLICATION

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

DIMENSION (mm)



SOLDER PAD LAYOUT (mm)



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 (VDD) ±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	—	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) Disable (Low voltage or GND)	2.31	—	1.75	—	2.31	—	1.75	—	V	
	—	0.99	—	0.75	—	0.99	—	0.75		
RMS Phase Jitter (Integrated 12 KHz ~ 20 MHz) Fo < 80 MHz 80 MHz ≤ Fo <125 MHz 125 MHz ≤ Fo <170 MHz 170 MHz ≤ Fo <200 MHz 200 MHz ≤ Fo	—	1	—	1	—	1	—	1	pSec	
	—	0.5	—	0.5	—	0.5	—	0.5		
	—	0.3	—	0.3	—	0.3	—	0.3		
	—	0.5	—	0.5	—	0.5	—	0.5		
	—	0.3	—	0.3	—	0.3	—	0.3		
Phase Noise @ 156.25 MHz 100Hz 1 kHz 10 kHz	-100		-100		-100		-100		dBc/Hz	
	-130		-130		-130		-130			
	-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 VDD.

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.

Rev(19)03/2017

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Specifications subject to change without notice.