

OW Type

5.0 x 3.2 mm SMD LVPECL/LVDS Crystal Oscillator

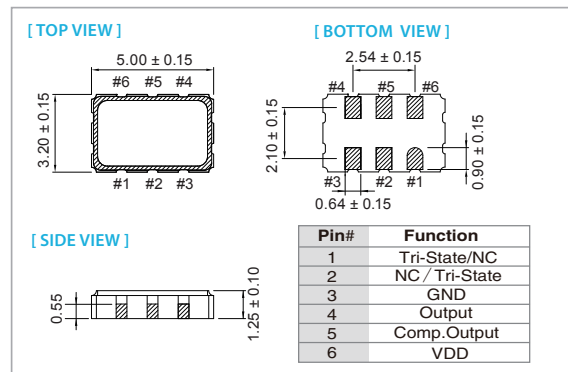
FEATURE

- Typical 5.0 x 3.2 x 1.25 mm hermetically sealed ceramic package.
- Very low jitter performance: typical 0.3 pS RMS from 12 k - 20 MHz.
- Fundamental/3rd overtone crystal design.
- Output frequency up to 320 MHz.
- Operating temperature up to 125°C
- Tri-state enable/disable

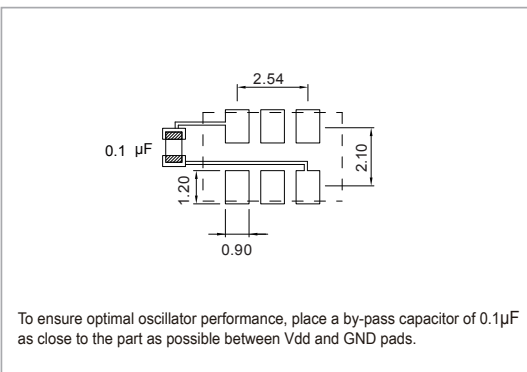
TYPICAL APPLICATION

- 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 (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		25, 106.25, 125, 156.25, 161.1328, 212.5								
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	2.275	—	1.475	—	—	1.6	—	1.6	V
	Output Low	—	1.68	—	0.88	0.9	—	0.9	—	
Transition Time: Rise/Fall Time ⁺		—	1.0	—	1.0	—	1.0	—	1.0	nSec
Start Time		—	10	—	10	—	10	—	10	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	100 Hz	-95		-90		-90		-90		dBc/Hz
	1 kHz	-125		-125		-120		-120		
	10 kHz	-140		-140		-140		-140		
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.

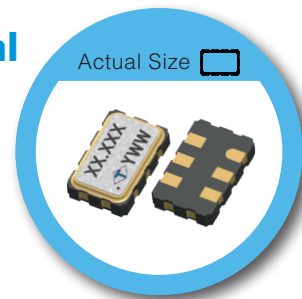
FREQ. STABILITY vs. TEMP. RANGE

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.



RoHS Compliant