

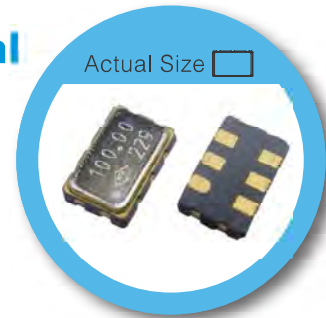
OW Type 5.0 x 3.2 mm SMD LVPECL/LVDS Crystal Oscillator

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

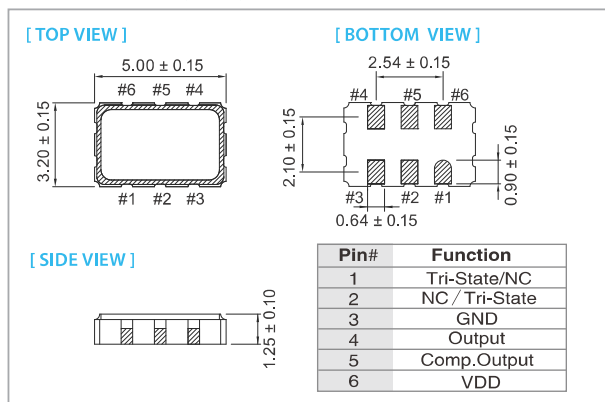
TYPICAL APPLICATION

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

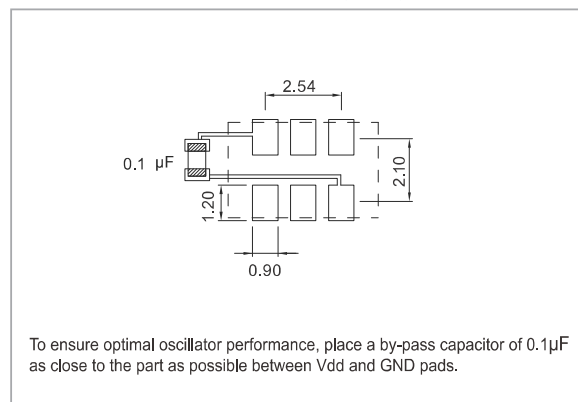


RoHS Compliant

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	25, 106.25, 125, 156.25, 161.1328, 212.5								MHz
Supply Current	10 MHz ≤ Fo < 160 MHz		75		75		50		mA
	160 MHz ≤ Fo < 250 MHz		100		100		50		
	250 MHz ≤ Fo ≤ 320 MHz		100		100		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 ⁺	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)									V
Enable (High voltage or floating)	2.31		1.75		2.31		1.75		
Disable (Low voltage or GND)	0.99		0.75		0.99		0.75		
RMS Phase Jitter (Integrated 12 KHz ~ 20 MHz)									pSec
Fo < 80 MHz	1		1		1		1		
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		dBc/Hz
	1 kHz		-125		-125		-120		
	10 kHz		-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