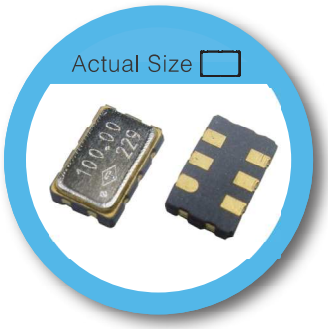
TAITIEN
Our Performance, Your Reputation

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

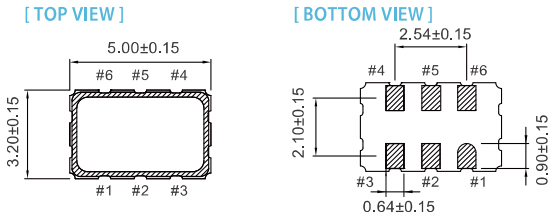


RoHS Compliant

FEATURE
- Industry Standard 5.0 x 3.2 x 1.25 hermetically sealed ceramic package
- Very low phase jitter: < 1 pS (0.6 pS, typ.) RMS
- Any frequency between 10 MHz and 1500 MHz
- Tri-state enable/disable
- Fast delivery

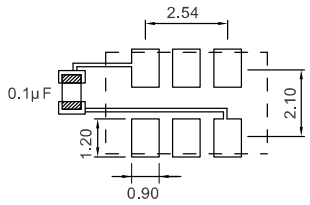
TYPICAL APPLICATION
- High-Speed Gigabit Ethernet, Fiber Channel, Storage Area Network, SONET
- Enterprise Server, SAS/SATA
- Microprocessors/DSP/FPGA
- Broadband Access
- Smart Grid

DIMENSION(mm)



Pin#	Function
1	NC/Tri-State
2	Tri-State/NC
3	GND
4	Output
5	Comp.Output
6	VDD

SOLDER PAD LAYOUT (mm)



To ensure optimal oscillator performance, place a by-pass capacitor of 0.1μF as close to the part as possible between Vdd and GND pads.

ELECTRICAL SPECIFICATION

Parameter	LVPECL				LVDS				Unit
	3.3V		2.5V		3.3V		2.5V		
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
Supply Voltage Variation (VDD)	VDD-5%	VDD+5%	VDD-5%	VDD+5%	VDD-5%	VDD+5%	VDD-5%	VDD+5%	V
Frequency Range	10	1500	10	1500	10	1500	10	1500	MHz
Standard Frequency	106.25, 125, 133.33, 150, 155.52, 156.25, 187.5, 212.5, 312.5, 622.08								
Supply Current 10MHz≦Fo≦1500MHz	-	50	-	50	-	50	-	50	mA
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	-	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) (At Integer Mode)	-	1.0	-	1.0	-	1.0	-	1.0	pSec
Phase Noise @156.25 MHz 100 Hz	-	-85	-	-85	-	-85	-	-85	dBc/Hz
1 kHz	-	-105	-	-105	-	-105	-	-105	
10 kHz	-	-115	-	-115	-	-115	-	-115	
Aging (@25°C 1st year)	-	±3	-	±3	-	±3	-	±3	ppm
Storage Temp. Range	-55	125	-55	125	-55	125	-55	125	°C

+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	△	○

* ○: 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.

Model Numbering Guide – Crystal Oscillator

Available options

Type	package (mm)	Supply Voltage(V)	Tri-State Function	Freq. Stability (ppm)	Temp. Range(°C)	Output Logic and Symmetry	Oscillator Mode	Appearance	Lead Free	Dash	Freq. (MHz)
O: Oscillator	Z:2.0 x 1.6 Y:2.5 x 2.0 X:3.2 x 2.5 V:5.0 x 3.2 C:7.0 x 5.0	E: 2.8/3.0/3.3 J :2.5 K:1.8 P:1.5 L:1.2 M:0.9	T: Fixed-Freq with Tri-State M: Multiplier Freq with Tri-State(only for V/C package) U: Ultra Low Noise design	A: ±5 B: ±10 P: ±15 C: ±20 D: ±25 E: ±30 F: ±40 G: ±50 H: ±100	E: 0~+85 I: -10~+60 C: -20~+70 D: -30~+85 L: -40~+85 J: -40~+105 H: -40~+125 F: -55~+125	J: CMOS 15pF / 50±5% K: CMOS 15pF / 50±10%	A: AT Fundamental T: AT 3rd Overtone Not Selectable by Customer	N :Normal	F: RoHS Compliant	–	XX.XXXXXX
P: Programmable Oscillator	Y: 2.5 x 2.0 X: 3.2 x 2.5	E: 2.8/3.0/3.3 J: 2.5 K: 1.8	T: Fixed-Freq with Tri-State	C: ±20 D: ±25 G: ±50 H: ±100	I: -10~+60 C: -20~+70 D: -30~+85 L: -40~+85	J: CMOS 15pF / 50±5%					
O: Oscillator (Differential Output)	A :3.2 x 2.5 W:5.0x3.2 T:7.0x5.0	E: 3.3 J: 2.5	T: Input to pin 2 (std.) R: Input to pin 1 (case by case) U: Ultra Low Jitter design (Only for T package)	D: ±25 G: ±50 H: ±100		L: LVPECL / 50±5% V: LVDS / 50±5% H: HCSL / 50±5%					
O: Oscillator (Fast Delivery series)	W:5.0x3.2 T:7.0x5.0	E: 3.3 J: 2.5	M: Multiplier Freq with pin 2 Tri-State N: Multiplier Freq. with PIN 1 Tri-State	D: ±25 G: ±50 H: ±100		J: CMOS 15pF / 50±5% L: LVPECL / 50±5% V: LVDS / 50±5%					

O	Y	E	T	C	C	J	A	N	F	–13.000000

*Not all combinations of options are available.

Example: OYETCCJANF-13.000000

Type	Oscillator
Package	2.5 x 2.0 mm
Supply Voltage(V)	3.3 V
Tri-State .	Fixed-Freq.
Freq. Stability	±20ppm
Temp Range	-20~+70 °C
Output	CMOS 15pF / Symmetry 50±5%
Oscillator Mode	AT Fundamental
Appearance	Normal Appearance
Lead Free	RoHs Compliant
Frequency	13.000000 MHz

www.taitien.com
sales@taitien.com.tw