

Extended Operating Temperature Range

Crystal Oscillator

OX/OY Series 3.2 x 2.5 / 2.5 x 2.0 mm SMD Crystal Oscillator

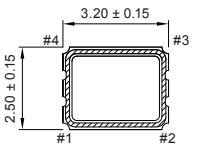
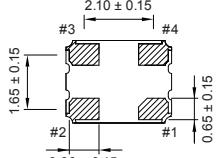
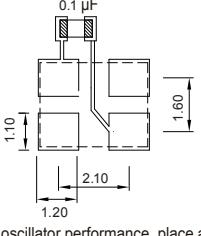
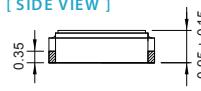
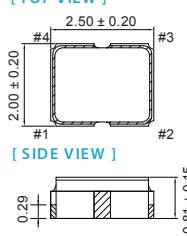
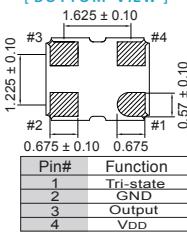
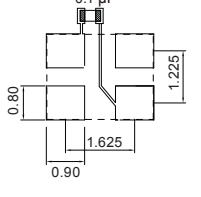
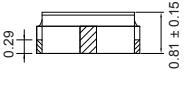
FEATURE

- Extended Industrial Operating Temperature Range -55°C ~ +125°C.
- Low jitter and phase noise
- Tight symmetry (45 to 55%) available.
- Operation voltage : 1.8V, 2.5V, 3.3V.
- Tri-state enable/disable.

TYPICAL APPLICATION

- Extreme environment applications.
- Oil drilling, geothermal.
- Commercial space, car/aircraft engine, aerospace & military.
- Industrial instrumentation.
- Automotive.

DIMENSION (mm)

[TOP VIEW]		[BOTTOM VIEW]		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.	
					
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ELECTRICAL SPECIFICATION

Parameter	3.3V		2.5V		1.8V		Unit
	Min.	Max.	Min.	Max.	Min.	Max.	
Supply Voltage Variation (VDD)	VDD-10%	VDD+10%	VDD-10%	VDD+10%	VDD-10%	VDD+10%	V
Frequency Range	1.25	100	1.25	100	1.25	100	MHz
Supply Current	Fo ≤ 80 MHz	--	10	--	8	--	mA
	Fo > 80 MHz	--	15	--	10	--	
Duty Cycle	45	55	45	55	45	55	%
Output Level (CMOS)	Output High (Logic "1")	2.97	--	2.25	--	1.62	--
	Output Low (Logic "0")	--	0.33	--	0.25	--	V
Transition Time: Rise/Fall Time+	--	3	--	4	--	5	nSec
Start Time	--	2	--	2	--	2	mSec
Tri-State(Input to Pin 1) Enable (High voltage or floating)	2.31	--	1.75	--	1.26	--	V
	Disable (Low voltage or GND)	--	0.99	--	0.75	--	0.54
Period Jitter(pk-pk)	--	40	--	40	--	40	pSec
RMS Phase Jitter (Integrated 12kHz ~ 20MHz)	--	1	--	1	--	1	pSec
Aging (@25°C 1st year)	--	±3	--	±3	--	±3	ppm
Storage Temp. Range	-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 10% and 90% of VDD, with an output load of 15pF

FREQ. STABILITY vs. TEMP. RANGE

Temp. (°C)	ppm	±30	±40	±50	±100
-40~+85	O	O	O	O	O
-40~+105	△	O	O	O	O
-40~+125	X	X	△	O	O
-55~+125	X	X	X	O	O

* O: 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.

Specifications subject to change without notice.

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