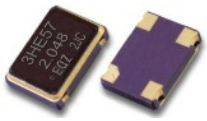
XO21 Oscillators

2.0 x 1.5 x 0.8mm SMD Clock Oscillator — 1.0MHz to 60MHz

FEATURES

- Robust industry standard proven clock oscillator design
- Tri-state function available
- Supply Voltage 1.8, 2.5 or 3.3 Volts
- 15pF Load Capability, 30pF or 50pF available on request
- Wide range of frequency options available



APPLICATIONS

- CPU, Graphics, Multimedia, A/V clocks
- MPEG/DVD/HDTV clocks
- Laser engine pixel / Set-top clocks
- OC-3, OC-12, OC-48 and OC-192 clocks
- SONET SDH / ATM clocks
- Fast Ethernet and Gigabit Ethernet clocks
- NTSC / PA Encoder / decoder clocks
- PLL / Synthesizer clocks
- Fibre Channel and ADSL clocks

ELECTRICAL SPECIFICATION

Model Number	XO21 Series		
Output Logic	CMOS		
Supply Voltage V_{DD}	1.8 V ±10%	+2.5 V ±10%	+3.3 V ±10%
Frequency Range	1MHz ~ 60MHz	1MHz ~ 60MHz	1MHz ~ 60MHz
Logic High "1" (90% of V_{DD} min.)	1.62V	2.25V	2.97V
Logic Low "0" (10% of V_{DD} max)	0.18V	0.25V	0.33V
Rise/Fall Time (Tr)	6ns max., Measured between 10% ~ 90% of wave form (CL = 15pF)		
Load	15pF typical	15pF typical (30pF, 50pF load available for +3.3V_{DD})	
Start-up Time	1.0 ~ 32.0MHz : 5ms (max) ; 32.1 ~ 160.0MHz : 10ms (max)		
Duty Cycle	Standard: 50%±10% ; Option 50% ±5% (Add "S" after the part number for this option)		
Enable/Disable	Enable/Disable function on Pad 1 is standard for XO21 series oscillators		

OPERATING TEMPERATURE RANGE

Frequency Stability Standard Values (If non-standard desired, ask for availability)	Frequency Stability over Operating Temperature Range			
	Commercial (-10° ~ +70°C)	±25ppm	±50ppm	±100ppm
	Industrial (-40° to +85°C)	±25ppm	±50ppm	±100ppm

Storage Temperature	-55° to +125°C
Ageing at 25°C	±3ppm maximum per year
Solder Profile	260°C max.

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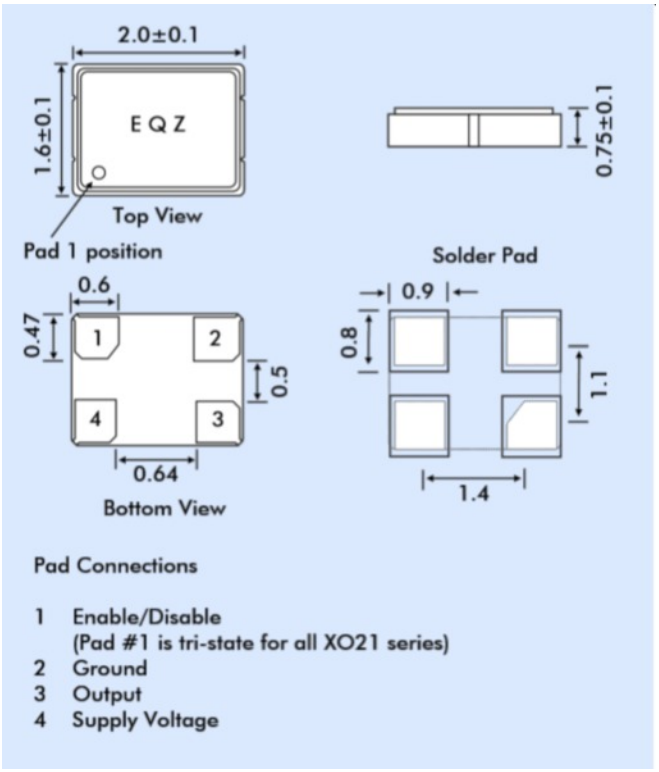
CURRENT CONSUMPTION

Supply Voltage	Frequency Range	Current Consumption (mA max.)
1.8V	<25MHz	5
	25MHz ~ 50MHz	8
2.5V	<25MHz	5
	25MHz ~ 50MHz	10
3.3V	<25MHz	5
	25MHz ~ 50MHz	12

OUTLINE & DIMENSIONS



Pad Connections

1 Enable/Disable
(Pad #1 is tri-state for all XO21 series)
2 Ground
3 Output
4 Supply Voltage

ORDERING/PART NUMBER GENERATION

Example: 20.000MHz XO21 050 U I T A

Frequency

Series Designation XO21

Stability
025 = ±25ppm
050 = ±50ppm
100 = ±100pp
(For non-standard value follow same format)

Output CMOS

Operating Temperature Range
C = -10° to +70°C Commercial
I = -40° to +85°C Industrial

Tristate

Supply Voltage
A = 3.3 Volts
B = 2.5 Volts
C = 1.8 Volts

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