



# Clock Oscillators

1.0MHz to 100.0MHz



### FEATURES

- HCMOS/TTL compatible.
- Enabled output optional.
- Industrial temperature optional.

### ELECTRICAL SPECIFICATIONS

**Operating Temperature Range:** 0°C to +70°C.  
(- 40°C to + 85°C optional for .005% ("A") and .01% ("B") Stability's.)

**Frequency Stability:** .01% Standard (.0025% and .005% optional).

**Input Voltage:** + 5.0VDC ± 0.5V.

**Enable Input Voltage:** 2.2V minimum.

**Disable Input Voltage:** 0.8V maximum.

**Output Load:** 50pF or 10 TTL loads from 1.0 to 40.0MHz,  
15pF or 10 TTL loads from 40.1 to 100.0MHz.

### MECHANICAL SPECIFICATIONS

**Marking Ink:** Epoxy, solvent resistant.

**Hermetically Sealed Package:** Leak rate less than  $2 \times 10^{-8}$  atmosphere cc/sec. of helium.

**Terminal Solderability:** A minimum of 95% coverage after solder dip.

### ENVIRONMENTAL SPECIFICATIONS

**Temperature Cycle:** - 55°C to + 85°C, 3 cycles.

**Shock:** 1000g, 0.35 millisecond, 1/2 sine wave, 3 shocks each plane.

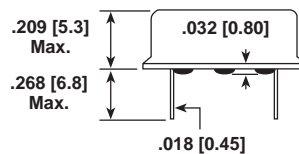
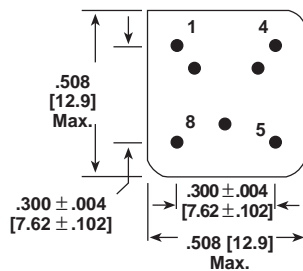
**Vibration:** .06 D.A., 10 - 55Hz, 20g, 55 - 200Hz.

**Humidity:** 85% relative humidity at + 85°C, 240 hours.

### STANDARD ELECTRICAL SPECIFICATIONS

| FREQUENCY RANGE (MHz) | INPUT CURRENT (mA) (Max.) | WAVEFORM SYMMETRY 2.5V OR 50%Vdd | RISE AND FALL TIME (nS) (Typ. Max.) | "ZERO" LEVEL 10%Vdd (Typ. Max.) | "ONE" LEVEL 90%Vdd (Typ. Min.) |
|-----------------------|---------------------------|----------------------------------|-------------------------------------|---------------------------------|--------------------------------|
| 1.0 to 23.999         | 20                        | 40/60                            | 5/10                                | 0.1/0.5                         | 5.0/4.5                        |
| 24.0 to 50.0          | 30                        | 40/60                            | 5/10                                | 0.1/0.5                         | 5.0/4.5                        |
| 50.001 to 70.0        | 40                        | 40/60                            | 5/10                                | 0.1/0.5                         | 5.0/4.5                        |
| 70.001 to 100.0       | 60                        | 40/60                            | 5/10                                | 0.1/0.5                         | 5.0/4.5                        |

### DIMENSIONAL CONFIGURATIONS [Numbers in brackets indicate millimeters]



| PIN                     | CONNECTION   |
|-------------------------|--------------|
| 1                       | N.C. or E/D  |
| 4                       | Ground       |
| 5                       | Output       |
| 8                       | + 5VDC       |
| ENABLE/DISABLE FUNCTION |              |
| *Pin 1 E/D              | Pin 5 Output |
| Open                    | Active       |
| High (1)                | Active       |
| Low (0)                 | High Z       |

\*An internal pull-up resistor is connected to Pin 1 allowing active output if Pin 1 is left open.

### HOW TO ORDER

**XO-52**  
MODEL

**B**  
FREQUENCY STABILITY

AA = .0025% (25PPM)  
A = .005% (50PPM)  
B = .01% (100PPM)  
Standard

**R**  
OTR

Blank = 0°C to + 70°C  
R = - 40°C to + 85°C

**E**  
ENABLE/DISABLE

Blank = Pin 1 open  
E = Disable to Tristate

**40M**  
FREQUENCY/MHz