

## Temperature Compensated Crystal Oscillator

- Excellent frequency stability
- Wide operating temperature range
- Clipped-sine/CMOS/TTL output, tight specifications
- 20.4x12.8x7.8mm standard metal package, case ground for minimizing RF radiation
- Gull-Wings available for SMT.

# TO501

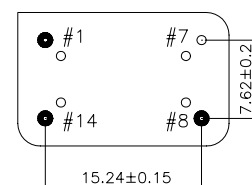
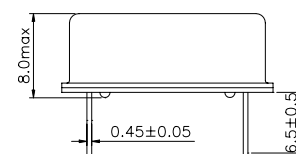
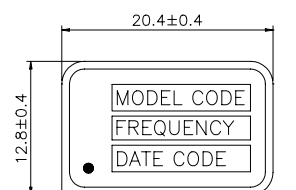
### Specifications:

|                                                |                                                                   |       |
|------------------------------------------------|-------------------------------------------------------------------|-------|
| <b>Frequency Range:</b>                        | 1.5 MHz ~ 30.0 MHz                                                |       |
| <b>Operating Temperature:</b>                  | 0°C ~ +50°C                                                       | - A   |
|                                                | -10°C ~ +60°C                                                     | - B   |
|                                                | -20°C ~ +70°C                                                     | - C   |
|                                                | -30°C ~ +75°C                                                     | - D   |
|                                                | -40°C ~ +85°C                                                     | - L   |
| <b>Storage Temperature:</b>                    | -40°C ~ +85°C                                                     |       |
| <b>Frequency Stability:</b>                    |                                                                   |       |
| Vs. Temperature:                               | ± 0.5 ~ ± 5.0 ppm                                                 |       |
| Vs. Input Voltage:                             | ± 0.3 ppm at voltage ± 5%                                         |       |
| Vs. Load:                                      | ± 0.2 ppm at load ± 10%                                           |       |
| Aging:                                         | ± 1.0 ppm max first year                                          |       |
| <b>Pulling Range:</b>                          | ± 5 ~ ± 15 ppm (optional)<br>(None for TCXO)                      |       |
| <b>Output Waveform:<br/>&amp; Output Load:</b> | Clipped-Sine/10KΩ/10pF                                            | - S   |
|                                                | TTL/10LSTTL/50±10%                                                | - T   |
|                                                | CMOS/15pF/50±5%                                                   | - C   |
| <b>Supply Current:</b>                         |                                                                   |       |
| Clipped-Sine wave:                             | 9.6 MHz ~ 20.0 MHz                                                | 2.0mA |
|                                                | 20.0 MHz ~ 30.0 MHz                                               | 2.5mA |
| TTL/COMS:                                      | 1.5 MHz ~ 20.0 MHz                                                | 20mA  |
|                                                | 20.0 MHz ~ 30.0 MHz                                               | 25mA  |
| <b>Supply Voltage:</b>                         | +3.3 VDC (± 0.2%)<br>+5.0 VDC (± 0.3%)                            |       |
|                                                |                                                                   | - P   |
| <b>Phase Noise:</b>                            | -110dBc/Hz at 100Hz<br>-135dBc/Hz at 1KHz<br>-145dBc/Hz at 100KHz |       |
| <b>Rise/Fall Time:</b>                         | 5ns max (TTL/CMOS)                                                |       |

Note:

1. Other frequencies, stabilities, and operating temperature ranges available. Consult VTC Support for specific requirements.
2. Not all combinations of the above, stabilities, and temperature ranges are available. Consult VTC Support if your requirement is not standard.
3. All specifications subject to change without notice.

### TO-F



| Pin | Configurations |
|-----|----------------|
| 1   | VC or NC       |
| 7   | Ground         |
| 8   | Output         |
| 14  | Supply VDD     |

All dimensions are in mm

### Ordering Information

Product name + Operating Temperature + Stability + Output Wave + Pulling Range + Frequency (MHz).

i.e. TO501B2.0S-8.0MHz ±2.0ppm/-10°C~+60°C/3.3V

Or TO501B1.5CP-8.0MHz ±1.5ppm/-10°C~+60°C/5.0V