

# PRODUKT-INFO

## VXO-T1 • VXO-T3

SMD Voltage Controlled Crystal Oscillators

### ■ FEATURES

1. Miniature package.
2. Industry standard.
3. TTL / HCMOS output compatible.
4. Tri-State enable.
5. Tape and Reel.
6. 5.0V and 3.3V available.



Actual Size

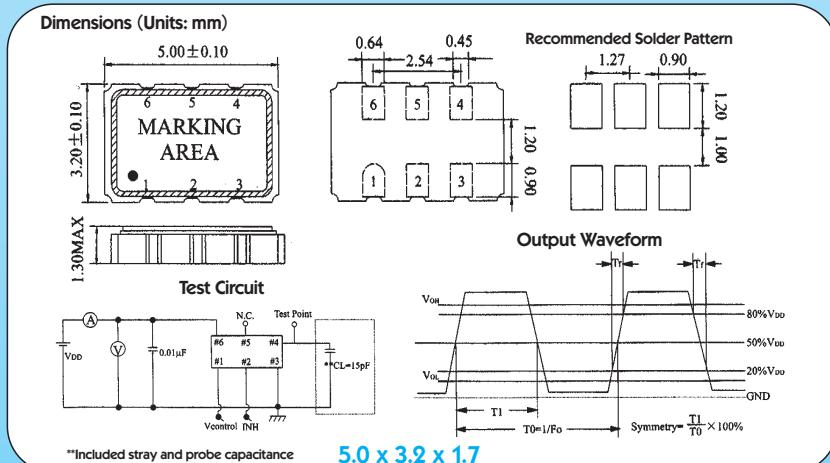


### ■ APPLICATION

Phase locked loops, phase shift keying, in telecommunication applications as ADSL, cable modem etc.

### ELECTRICAL SPECIFICATIONS

| Model                       | Condition                                 | VXO-T1  | VXO-T3              |
|-----------------------------|---|---|---------------------|
| Frequency Range*            |   | 1.750 MHz ~ 54.0 MHz                                |                     |
| Frequency Stability         | at +25°C                                  | ±15 ppm   |                     |
| Temperature Stability       | over T <sub>OPR</sub>                     | ±15 ppm / ±25 ppm / ±50 ppm                         |                     |
| Stability vs Power Change   | V <sub>DD</sub> ±5%                       | ±5 ppm  |                     |
| Stability vs Load Change    | 15 pF ±10%                                | ±3 ppm  |                     |
| Pullability                 | Over Control Voltage Range                | ±50, ±100, ±200 ppm                                 | ±50, ±100, ±150 ppm |
| Control Voltage Range       |   | 0.5V ~ 4.5V   | 0V ~ 3.3V           |
| Operating Temp. Range       |   | 0°C to +70°C, -40°C to +85°C option                 |                     |
| Storage Temp. Range         |   | -55°C to +125°C                                     |                     |
| Power Supply Voltage        |   | 5.0V ±5%  | 3.3V ±5%            |
| Supply Current              |   | 30 mA max.  |                     |
| Output Symmetry             | at 1/2 V <sub>DD</sub>                    | 40% ~ 60%; 45% ~ 55% option                         |                     |
| Rise Time                   | 20% V <sub>DD</sub> ~ 80% V <sub>DD</sub> | 8 ns max.   | 10 ns max.          |
| Fall Time                   | 80% V <sub>DD</sub> ~ 20% V <sub>DD</sub> | 8 ns max.   | 10 ns max.          |
| Output Voltage              | V <sub>OH</sub><br>V <sub>OL</sub>        | 90% V <sub>DD</sub> min.<br>10% V <sub>DD</sub> max |                     |
| Output Load                 |   | 15pF max.   |                     |
| Start Time                  |   | 10 ms max.  |                     |
| Aging (at +25°C) first year | +25°C ±3°C                                | ±5 ppm / year max.                                  |                     |



■ OPTIONS: A 0.01 uF bypass capacitor should be placed between V<sub>DD</sub> (pin 6) and GND (pin 3) to minimize power supply line noise. For frequency over 40.0 MHz, please consult us.

| Terminal | Connection      |
|----------|-----------------|
| #1       | V control       |
| #2       | Tri-State       |
| #3       | GND             |
| #4       | OUTPUT          |
| #5       | N.C.(Tri-State) |
| #6       | V <sub>DD</sub> |

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and more

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All specifications subject to change without notice.

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