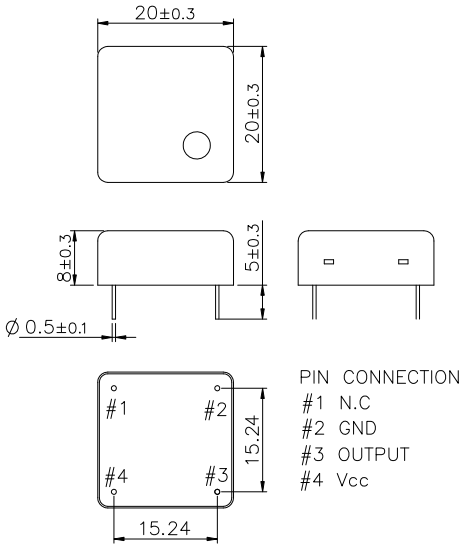
# TCXO
## PT208A Series
## HCMOS/TTL
## 4PIN DIP PACKAGE

### * PART NUMBERING GUIDE

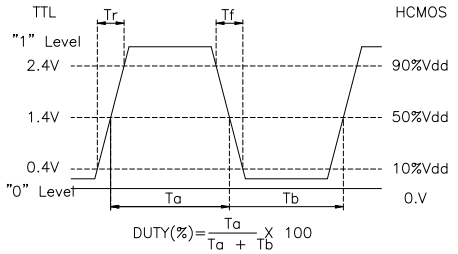
PT208A - 3 H 10 3D 5 - 20.000M

- Frequency: M : MHz
- Supply Voltage: 5 : 5.0V, 3 : 3.3V
- Output: H : HCMOS/TTL
- Stability vs. Temperture: See Table1
- Temperature Range: Table2

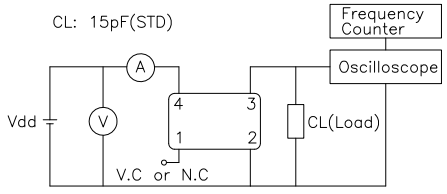
### MECHANICAL DIMENSIONS




### OUTPUT WAVEFORM




### TEST CIRCUIT




### ELECTRICAL SPECIFICATION

| | |
|---|---|
| Frequency range | 1.000KHz to 250.000MHz<br>(All combinations for Frequency in the range and temp. stability can't be available, please contact factory.) |
| Frequency Stability<br>vs. Temperature<br>vs. Supply Voltage<br>vs. Load<br>vs. Aging | <br>±0.5 ppm to ±5.0ppm<br>±0.1 / ±0.3 ppm max / Vdd ± 5%<br>±0.2 ppm max /15pF ±10%<br>±1.0 ppm max/ year |
| Temperature Range<br>Operating<br>Storage | <br>See Table 2<br>-55℃ to 125℃ |
| Supply Voltage | 3.3V ± 5%<br>5.0V ± 5% |
| Input Current<br>3.3 V , 5V | 1.000KHz ~ 40.000MHz ~ 250.000MHz<br>15mA max ~ 30mA max ~ 50mA max |
| Output characteristics | HCMOS / TTL<br>Logic "1" 90% Vdd min / 2.4V min<br>Logic "1" 10% Vdd max / 0.4V min<br>Load 15pF / 10TTL<br>Duty Cycle 40/60 / 40/60<br>Rise & Fall 10nS max / 10nS max |
| Phase Noise (typical)<br>@20MHz | -80 dBc / Hz @ 10Hz<br>-120 dBc / Hz @ 100Hz<br>-135 dBc / Hz @ 1KHz<br>-140 dBc / Hz @ 10KHz<br>-145 dBc / Hz @100KHz |
| Frequency Adjustment | ±3ppm min by internal trimmer |

### ENVIROMENTAL & MECHANICAL SPECIFICATION

| | |
|---|---|
| Shock | MIL-STD-883C, Method 2002, Condition B |
| Vibration | MIL-STD-883C, Method 2007, Condition A |
| Solderability | MIL-STD-883C, Method 2003 |
| Seal integrity | MIL-STD-883C, Method 1014, Condition C & A2 |
| Marking | MIL-STD-202F, Method 215 |

### TABLE1

| Symbol | Stability |
|---|---|
| 05 | ±0.5ppm |
| 10 | ±1.0ppm |
| 15 | ±1.5ppm |
| 20 | ±2.0ppm |
| 25 | ±2.5ppm |
| 30 | ±3.0ppm |
| 35 | ±3.5ppm |
| 50 | ±5.0ppm |

### TABLE2

| Symbol | Temp. | Symbol | Temp. |
|---|---|---|---|
| 0 | 0℃ | A | 50℃ |
| 1 | -10℃ | B | 60℃ |
| 2 | -20℃ | C | 70℃ |
| 3 | -30℃ | D | 75℃ |
| 4 | -40℃ | E | 80℃ |
| | | F | 85℃ |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