

# TCXO

## PT142A Series

### HCMOS/TTL

### 4PAD SMD PACKAGE

#### \* PART NUMBERING GUIDE

PT142A - 5 H 10 3 D - 20.000M

Supply Voltage  
5 : 5.0V  
3 : 3.3V

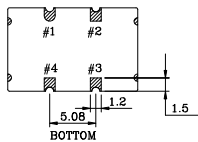
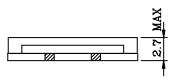
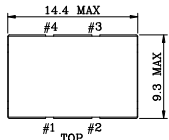
Output  
H : HCMOS/TTL

Stability vs. Temperature  
See Table1

Frequency  
M : MHz

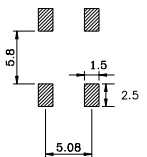
Temperature Range  
Table2

#### MECHANICAL DIMENSIONS

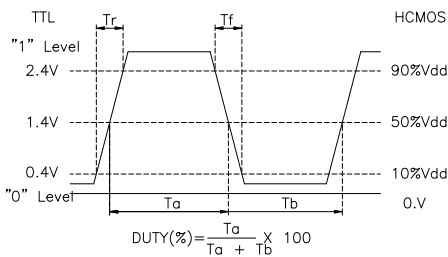


**CONNECTION**  
#1 V.C or N.C  
#2 GND  
#3 OUTPUT  
#4 Vcc

#### Recommended Soldering Pattern



#### OUTPUT WAVEFORM



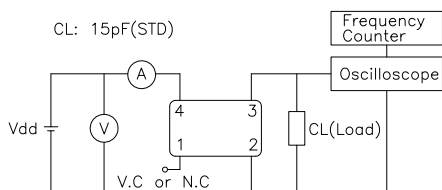
#### ELECTRICAL SPECIFICATION

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

#### 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

#### TEST CIRCUIT



#### 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°C	A	50°C
1	-10°C	B	60°C
2	-20°C	C	70°C
3	-30°C	D	75°C
4	-40°C	E	80°C
		F	85°C