



# Clock Oscillators

## T6000P Series

### Ceramic, SMD



### Features:

◆ Programmable

◆ 2.5 x 2.0 x 1.0 mm

Parameter	Unit	Min.	Max.
Frequency Range	MHz	1.00	200.00
Frequency Stability			
-10 to 60°C	ppm	±20, ±25, ±50	
-20 to 70°C	ppm	±20, ±25, ±50	
-40 to 85°C	ppm	±25, ±50	
Storage Temperature Range	°C	-55	+125
Aging	ppm	-	±3
Voltage Sensitivity (±10%)	ppm	-2	2
Supply Voltage	V	1.8, 2.5, 3.3	±10%
Current Consumption	mA	See Table	
Output Waveform		CMOS	
Output Load	pF	-	15
Output Voltage Logic High (V <sub>OH</sub> )	V	90% of V <sub>DD</sub>	-
Output Voltage Logic Low (V <sub>OL</sub> )	V	-	10% of V <sub>DD</sub>
Transition Time (Rise and Fall)		See Table	
Duty Cycle		45/55% standard	
Tri-State			
Enable	V	70% of V <sub>DD</sub>	-
Disable	V	-	30% of V <sub>DD</sub>
Start Up Time	mSec	-	2
Standby Current	µA	-	15
Period Jitter			
1.00 to 40.00 MHz	pSec	-	40
Over 40.00 MHz	pSec	-	200

Maximum frequency for 3.3 V is 200.00 MHz; 2.5 V is 166.00 MHz; 1.8 V is 11.00 to 133.00 MHz.  
Frequency Stability is inclusive of Operating Temperature Range, Supply Voltage, Current and Load.

### Current Consumption

Maximum specified limit

Frequency Range	Unit	3.3 V	2.5 V	1.8 V
1.00 to 30.00 MHz	mA	10	8	6
>30.00 to 75.00 MHz	mA	15	10	8
>75.00 to 133.00 MHz	mA	20	15	12
>133.00 to 166.00 MHz	mA	22	15	-
>166.00 to 200.00 MHz	mA	25	-	-

### Transition Time (Rise and Fall)

Maximum specified limit

Frequency Range	Unit	3.3 V	2.5 V	1.8 V
1.00 to 10.00 MHz	nSec	3	4	5
>10.00 to 200.00 MHz	nSec	2	3	4

### T6000P Package

Measurements: Inches (mm)  
All tolerances: ±0.008 (±0.2)

Recommended Solder Pattern

PAD	Function	PAD	Function
1	Tri-State or NC	2	Ground
3	Output	4	V <sub>DD</sub>

Environmental	
Terminal Material	W
Terminal Plating	Ni-AU
REACH Compliant	Yes
RoHS Compliant	Yes
RoHS Exemptions	No
Re-flow Temp. Max.	260°C
MSL	1

CRYSTAL OSCILLATOR: T6000P Series