

7 x 5mm High Frequency Low Jitter HCMOS Clock Oscillator

FEATURES

- Industry-standard 7.0 x 5.0mm package
- Frequency Range 125MHz to 260MHz
- High frequency range at low cost
- Supply voltage 2.5V or 3.3Volts
- Ultra-low phase noise and jitter
- Tristate function to conserve power

DESCRIPTION

XOA91 series oscillators are designed to provide an ultra-low phase noise and low jitter HCMOS output at high frequencies from 125MHz to 260MHz. An enable/disable function is standard and the oscillator may also be specified with a power down function.

SPECIFICATION

Frequency Range:	125.0MHz to 260.0MHz
Output Logic:	HCMOS
Phase Jitter:	0.2ps typical
RMS Period Jitter:	2.5ps typical
Frequency Stability	
Commercial:	±25ppm to ±100ppm -10° to +70°C
Industrial:	±25ppm to ±100ppm -40° to +85°C
Input Voltage:	+2.5V to +3.3VDC ±10%
Output Voltage	
High '1':	+2.97V minimum
Low '0':	+0.33 V maximum
Rise/Fall Time:	0.25ns typical, 0.5ns max. (20%Vdd to 80%Vdd)
Current Consumption:	80mA typical (Frequency dependent)
Load:	15pF
Start-up Time:	5ms typical, 10ms maximum
Duty Cycle:	50% ±5% (Measured at Vdd-1.3V)
Input Static	
Discharge Protection:	2kV maximum
Ageing:	±2ppm per year maximum

ABSOLUTE MAXIMUM RATINGS

Permanent damage may occur if units are operated beyond specified limits.

Supply Voltage:	+4.6 VDC max.
Input Voltage Vi:	Vss-0.5 min., Vdd +0.5V max.
Input Voltage Vo:	Vss-0.5 min., Vdd +0.5V max.

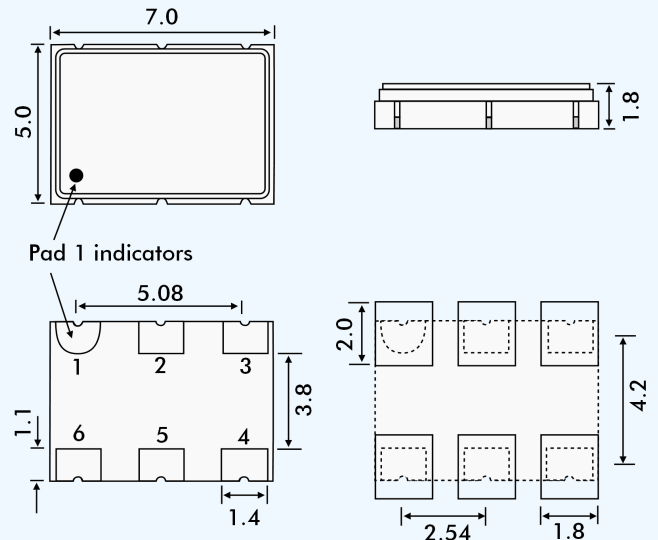
PART NUMBER SCHEDULE

Example: **250.00MHz XOA91050UCTB***

Frequency	250.00MHz
Series Designation	XOA91
Stability	050 = ±50ppm
100 = ±100ppm	
025 = ±25ppm	
Output Universal	
Operating Temp. Range	C = Commercial (-10°~70°C)
I = Industrial (-40°~+85°C)	
Output Option	T=Tristate (enable/disable) P= Powerdown*
Supply Voltage	A = 3.3 Volts
B = 2.5 Volts	



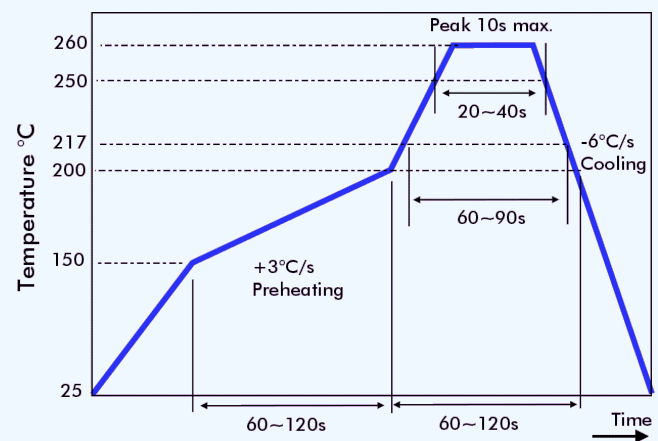
OUTLINE & DIMENSIONS



Pad Connections

- 1 Not connected
- 2 Enable/Disable (Tristate)
- 3 Ground
- 4 Output
- 5 Not connected
- 6 Supply Voltage

SOLDER TEMPERATURE PROFILE



TRISTATE

DISABLE Output is disabled when Pad 1 is taken below 0.3 Vcc referenced to ground. Oscillator is continues to run.

ENABLE Oscillator is enable when Pad 1 is taken above 0.7 Vcc referenced to ground.

POWER DOWN Available by special request: Oscillator shuts down when disabled.