XOW91 Series Oscillators

7 x 5mm High Frequency HCMOS Oscillator   125MHz to 800MHz

FEATURES

- Industry-standard 7.0 x 5.0mm package
- High frequency range 125MHz to 800MHz
- High frequency range at low cost
- Supply voltage 3.3Volts
- Tristate function to conserve power

DESCRIPTION

XOW91 series oscillators are designed to provide a high quality HCMOS output at high frequencies from 125MHz to 800MHz. Phase and RMS period jitter are kept within low limits. An enable/disable function is standard and the oscillator may also be specified with a power down function.

SPECIFICATION

Frequency Range:	125.0MHz to 800.0MHz
Output Logic:	HCMOS
Integrated Phase Jitter:	2.6ps typical for 155.520MHz
RMS Period Jitter:	4.3ps typical for 155.520MHz
Period Jitter Peak to Peak:	27ps typical for 155.520MHz
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':	90% Vdd minimum
Low '0':	10% Vdd maximum
Rise/Fall Time:	2.4ns typical (20%Vdd to 80%Vdd, 15pF load)
Current Consumption:	45mA maximum (15pF load)
Load:	15pF
Start-up Time:	5ms typical, 10ms maximum
Duty Cycle:	50% ±5% (Measured at 50% Vdd)
Input Static Discharge Protection:	2kV minimum
Ageing:	±2pmm 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.

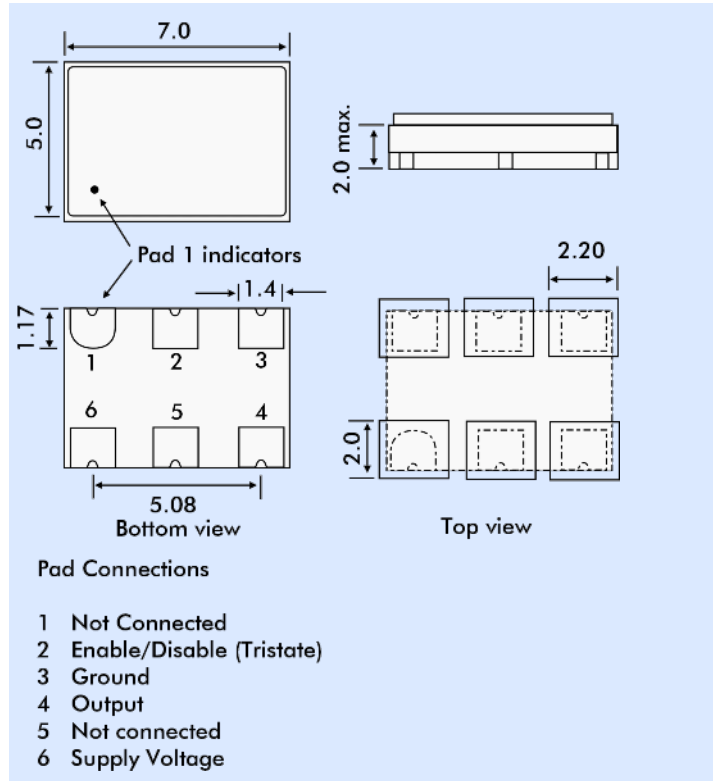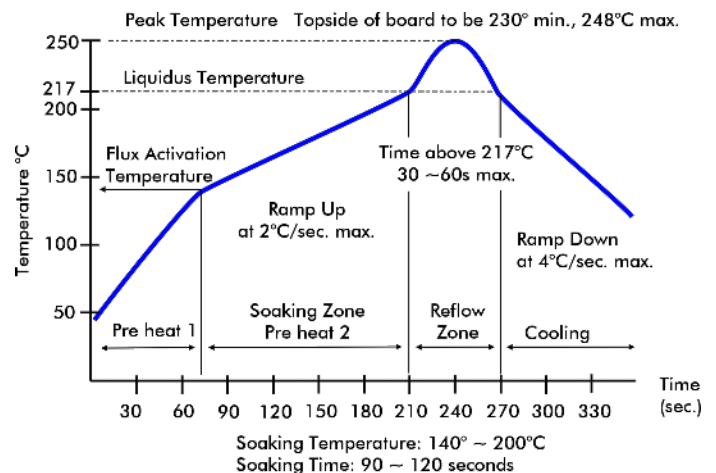### PART NUMBER SCHEDULE

Example: 200.00MHz XOW91050UCTA

Frequency
Series Designation XOW91
Stability
　　100 = ±100ppm
　　050 = ±50ppm
　　025 = ±25ppm
Output Universal (CMOS/TTL)
Operating Temp. Range
　　C = Commercial (-10°~70°C)
　　I = Industrial (-40°~+85°C)
T=Tristate (enable/disable) P= Powerdown
Supply Voltage
　　A = 3.3 Volts

OUTLINE & DIMENSIONS

Pad 1 indicators

Bottom view

Top view

Pad Connections

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

SOLDER TEMPERATURE PROFILE

Peak Temperature   Topside of board to be 230° min., 248°C max.

Liquidus Temperature

Flux Activation Temperature

Ramp Up at 2°C/sec. max.

Time above 217°C 30 ~60s max.

Ramp Down at 4°C/sec. max.

Pre heat 1 | Soaking Zone Pre heat 2 | Reflow Zone | Cooling

Soaking Temperature: 140° ~ 200°C
Soaking Time: 90 ~ 120 seconds

TRISTATE FUNCTION

DISABLE	Output is disabled when Pad 1 is taken below 0.3 Vcc referenced to ground. Oscillator continues to run while disabled.
ENABLE	Oscillator is enabled when Pad 1 is taken above 0.7 Vcc referenced to ground.
POWER DOWN	Available by special request: Oscillator shuts down when disabled. Longer time to enable.