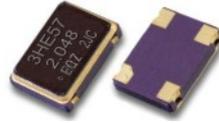


FEATURES

- ± 1 ppm tolerance, ± 5 ppm over -10° to $+70^\circ$ C
- A clock oscillator with close to TCXO performance
- Femto second phase jitter and -154 dBc/Hz at 100kHz offset
- An economic solution for tight tolerance and stability clocks



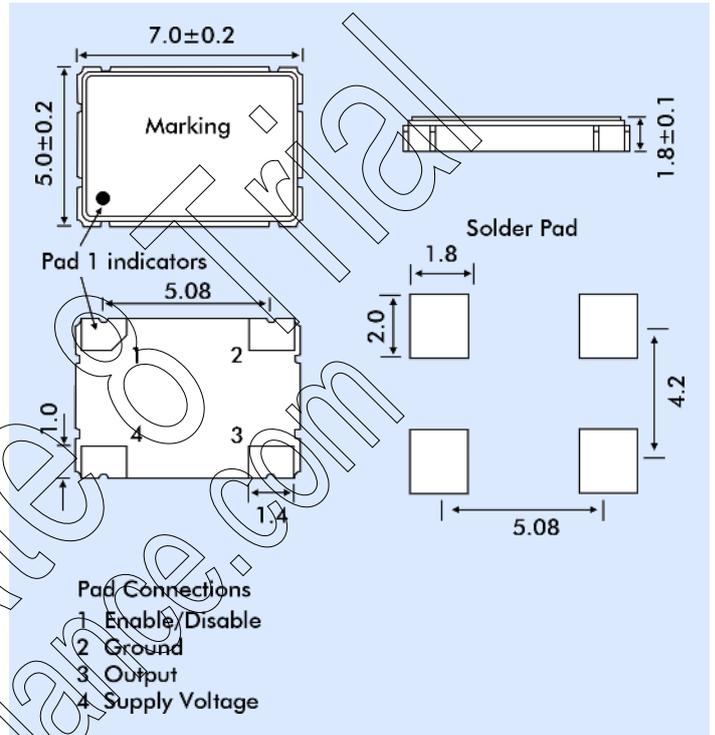
DESCRIPTION

XOE91 oscillators are high performance SMD clock oscillators with tight temperature stability. Frequency tolerance is ± 1 ppm at 25° C with stability of ± 5 ppm over -10° to $+70^\circ$ C. XOE91 oscillators exhibit superior phase noise performance: -154 dBc/Hz at 100kHz. Integrated phase jitter is 300fs typical, 12kHz to 20MHz.

SPECIFICATION

Frequency Range:	20.0MHz to 60.0MHz
Output Logic:	LVC MOS
Frequency Tolerance:	± 1 ppm maximum at 25° C
Frequency Stability:	± 5 ppm over -20° to $+70^\circ$ C (see part number information)
Output Voltage HIGH '1':	Vdd * 0.9 minimum
Output Voltage LOW '0':	Vdd * 0.1 maximum
Load:	15pF
Current Consumption:	Supply voltage dependent, see table
Rise/FallTime	
Vdd 1.8V or 2.5V:	6ns maximum (10% to 90%Vdd)
Vdd 3.3V:	4ns maximum (10% to 90%Vdd)
Start-up Time:	0.6ms typical, 1.0ms maximum
Symmetry:	$50\% \pm 5\%$ measured at Vdd/2
Tristate Function (Pad 1):	Implemented as standard
Phase Jitter (rms):	300 fs typical, 12kHz to 20MHz
Phase Noise:	See table
Storage Temperature:	-55° to $+150^\circ$ C
Ageing:	± 2 ppm/year max. for first year

OUTLINE & DIMENSIONS



CURRENT CONSUMPTION

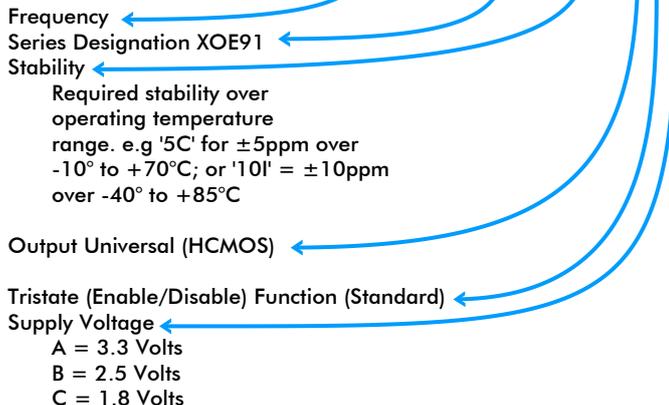
Frequency	Supply Voltage ($\pm 10\%$)		
	+1.8V	+2.5V	+3.3V
20.0~39.99MHz	3.0mA	3.5mA	4.0mA
40.0~5.0MHz	4.5mA	5.0mA	7.0mA

SSB PHASE NOISE

Offset	10Hz	100Hz	1kHz	10kHz	100kHz	1MHz	10MHz
dBc/Hz	-70	-101	-128	-148	-154	-156	-160

PART NUMBERING

Example: **32.000MHz XOE91-5C-UTC**



SOLDER TEMPERATURE PROFILE

