

FEATURES

- Designed for surface mount applications using infrared, vapor phase, or epoxy mount techniques
- CMOS and TTL compatible
- Low power consumption
- Optional Output Enable/Disable with Tri-State
- Low EMI emission
- High shock resistance (HG version)
- Full military testing available
- Hermetically sealed ceramic package



DESCRIPTION

XOK95 oscillators consist of a TTL/CMOS-compatible hybrid circuit with a miniature quartz crystal packaged in a low-profile, ceramic package. Utilizing the latest advancements in production technology, the combination of optimized design and high quality materials provide a highly reliable clock oscillator suitable for defence and aerospace applications.

APPLICATIONS

Military & Aerospace

- Smart munitions
- Cockpit Systems
- Navigation
- Engine control systems

Industrial, Computer & Communications

- Industrial controls
- Instrumentation
- Microprocessor clocks

Medical

- Infusion pumps

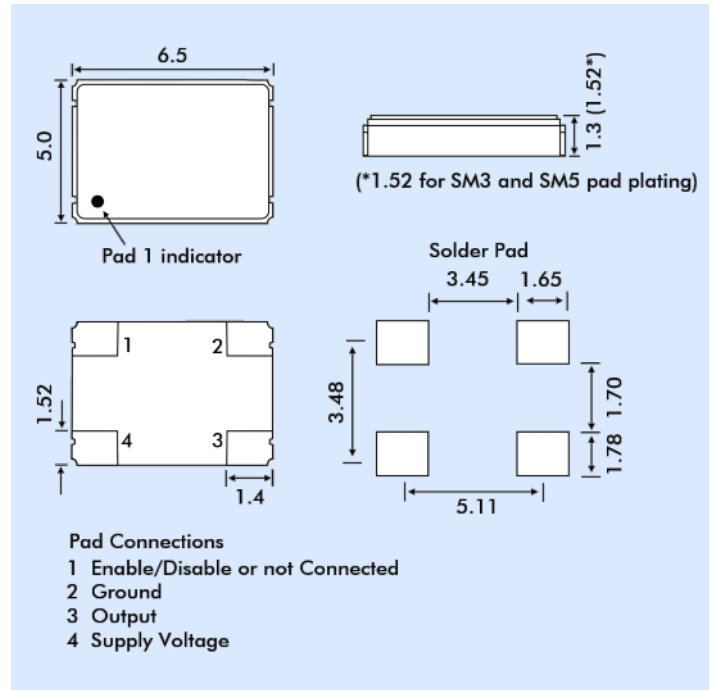
ABSOLUTE MAXIMUM RATINGS

Supply Voltage Vdd:	-0.5V to 7.0V
Storage Temperature Range:	-55° to +125°C
Maximum Process Temperature:	260° for 20 seconds

PACKAGING OPTIONS

XOK95 oscillators are supplied tray packed for quantities <250 pieces. Quantities above 250 pieces are supplied tape and reeled; 16mm tape on 178mm or 330mm reels per EIA 418.

OUTLINE & DIMENSIONS



COMPARISON OF ENABLE/DISABLE OPTIONS

There are three Enable/Disable options available, E, T and N. Both the E and T versions have Tri-state outputs. In the E version the oscillator stops, in the T version the oscillator continues to run. The N version (no tristate function) does not have pin 1 connected internally.

	E	T
	Enable (Pin 1 High)	
Output:	Frequency Output	Frequency Output
Oscillator:	Oscillates	Oscillates
Current:	Normal	Normal
	Disable (Pin 1 Low)	
Output:	High Z state	High Z state
Oscillator:	Stops	Oscillates
Current:	Very low	Lower than normal

When Pad 1 is allowed to float it is held high by an internal pull-up resistor.

SPECIFICATION

Note: Specifications are typical at 25°C unless otherwise noted. Specifications are subject to change without notice. Tighter specifications are available, please contact Euroquartz sales.

Frequency Range:	200.0kHz to 200.0MHz
Supply Voltage ¹ :	0.9 Volts to 5.0 Volts ±10%
Calibration Tolerance ² :	±30 ppm
Frequency Stability over Temperature ³	
Commercial (-10 to +70°C):	±15 to ±50 ppm
Industrial (-40 to +85°C):	±30 to ±100 ppm
Military (-55 to +125°C):	±40 to ±100ppm
Output Load (CMOS) ⁴ :	15 pF
Supply Current:	See table
Start-up Time:	5 ms maximum
Rise/Fall Time:	6 ns maximum
Duty Cycle:	40/60% minimum
Ageing, first year:	±10 ppm maximum
Shock, survival:	Standard: 5000g, 0.3 ms, ½ sine HG: 10,000g, 0.3 ms, ½ sine
Vibration, survival ⁵ :	20g, 10 ~ 2,000Hz swept sine
Operating Temp Ranges	-10°C to +70°C (Commercial) -40°C to +85°C (Industrial) -55°C to +125°C (Military)

Notes:

1. Voltages available: 0.9 V, 1.8 V, 2.5 V, 3.0 V, 3.3 V, 5.0 V. Not all voltages are available for all frequencies. Contact sales.
2. Tighter tolerances available.
3. Does not include calibration tolerance. Tighter tolerance may be available.
4. Higher CMOS loads and TTL loads available. Contact Euroquartz.
5. Per MIL-STD-202G, Method 204D, Condition D. Random vibration testing is also available.

All parameters are measured at ambient temperature with a 10MΩ, 15pF load.

SUPPLY CURRENT

Frequency	Supply Current Vdd = 3.3V	Supply Current Vdd = 5.0V
10MHz	2mA	4mA
24MHz	4mA	8mA
30MHz	6mA	10mA
40MHz	8mA	12mA
50MHz	10mA	14mA

HOW TO ORDER XOK95 SMD OSCILLATORS

Example: XOK954ST-SM3-32.0M/100/100/-/I

