XO44 Series Oscillators

11.4 x 9.6mm SMD HCMOS

- **Industry-standard hermetically-sealed package**
- **Frequency Range 20kHz to 130MHz**
- **Tristate (Enable/Disable) function as standard**
- **Supply voltage range 1.8, 2.5, 3.3 or 5.0 Volts**

RoHS COMPLIANT 2002 / 95 /EC

DESCRIPTION

XO44 oscillators consist of a TTL/CMOS-compatible hybrid circuit with a miniature quartz crystal packaged in a low-profile, industry-standard package. The high quality design and materials employed provide a highly reliable clock oscillator in a miniature package while mass production methods ensure that the XO44 provides a cost-effective oscillator solution.

SPECIFICATION

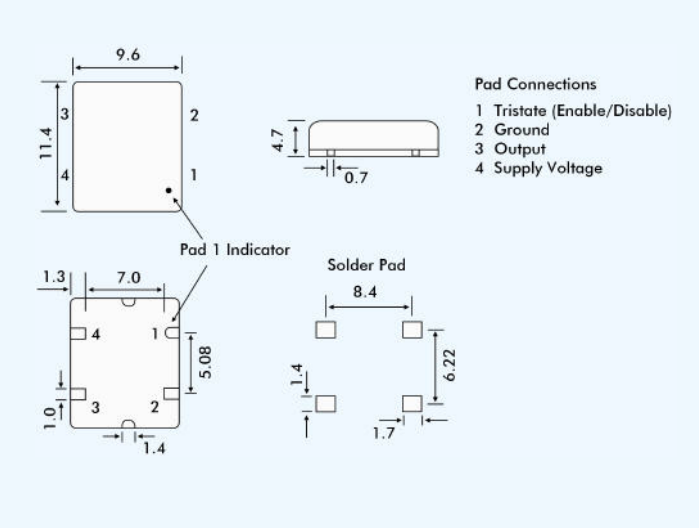
Supply Voltage:	1.8, 2.5, 3.3 or 5.0 Volts ±5%
Frequency Range	
1.8V Supply:	1.8MHz to 60.0MHz
2.5V Supply:	1.8MHz to 60.0MHz
3.3V Supply:	20.0kHz to 130.0MHz
5.0V Supply:	20.0kHz to 125.0MHz
Output Logic:	HCMOS/LSTTL
Frequency Stability*	
0° to +50°C:	from ±10ppm
0° to +70°C:	from ±15ppm
-40 to +85°C:	from ±25ppm
-55° to +105°C:	from ±100ppm
Rise/Fall Time:	*see table*
Output Voltage:	
HIGH '1':	90%Vdd minimum
LOW '0':	10%Vdd maximum
Output Load	
CMOS:	15pF (50pF available)
TTL:	10 LSTTL loads
Duty Cycle:	50%±5% typical
Supply Current:	*See table*
Operating Temperature	
	0~50°C (Light Commercial)
	0~70°C (Commercial)
	-40~+85 (Industrial)
	-55~+105°C (Military)
Storage Temperature:	-55~+105°C
Startup Time	
20kHz to 32MHz:	5ms max.
32MHz+ to 125MHz:	10ms max.
	(to reach 90% amplitude at 25±2°C)
Ageing:	±5ppm max. In first year
Phase Jitter RMS:	10ps typical
Enable Time:	100ms max.
Disable Time:	100ns max.
Tristate Function (Pad 1):	
	Output (Pad 3) is active if Pad 1 is not connected or a voltage to Pad 1 is 'HIGH'. Output is high impedance when 'LOW' or GROUND is applied to Pad 1.

* Frequency stability is inclusive of calibration tolerance at 25°C, frequency change due to shock & vibration, ±10 supply voltage variation and stability over temperature range.

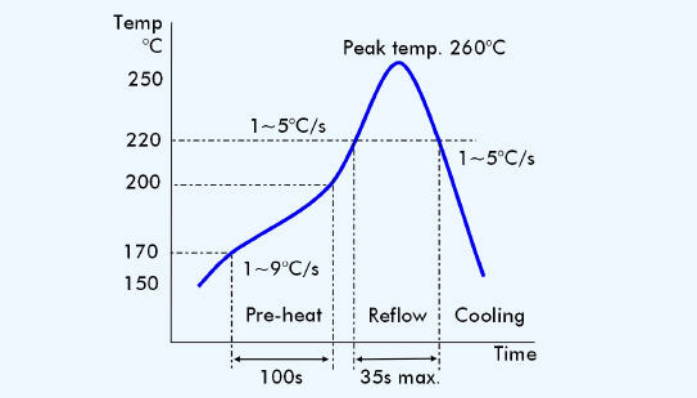
CURRENT CONSUMPTION & RISE/FALL TIME

Frequency Range	Supply Voltage (±10%)				Rise/Fall
	+1.8V	+2.5V	+3.3V	+5.0V	
20kHz to 32MHz	8mA	10mA	15mA	25mA	4ns max.
32MHz+ to 50MHz	10mA	14mA	16.5mA	35mA	3ns max.
40MHz+ to 125MHz	25mA	30mA	35mA	40mA	2ns max.

OUTLINE & DIMENSIONS



SOLDER TEMPERATURE PROFILE



PART NUMBERING

Example: 16.000MHz XO44050UCTA

Frequency
Series Designation XO44
Stability*
- 100 = ±100ppm
- 050 = ±50ppm
- 025 = ±25ppm

Output Universal
Operating Temp. Range
- C = Commercial
- I = Industrial
- M = Military

Tristate Function
Supply Voltage
Blank = 5.0 Volts
- A = 3.3 Volts
- B = 2.5 Volts
- C = 1.8 Volts

** For other stability requirements enter figure required.*

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