

## OCXO SERIES 5000

**Rev B**

1/23/04

### ■ FEATURES

**Small OCXO in SMD package  
Frequencies up to 77.760 MHz**

### ■ ELECTRICAL PERFORMANCE

PARAMETER	OCXO SERIES 5000	
	AT CUT CRYSTAL	SC CUT CRYSTAL
Supply voltage, nom.	5V $\pm$ 5% Standard (3.3V, 12V Optional)	
Power dissipation steady state	1.5 Watt Max.	
Warm-Up power	3 Watt Max	
Warm-Up time.	3 min Max	
Frequency range	1 To 77.760 MHz Standard	
Frequency Adjustment	$\pm$ 5PPM Min (0 to 5V) Typical	$\pm$ 0.7PPM Min (0 to 5V) Typical
Freq. stability vs. temperature LX: 0°C to 60°C FZ: -30°C to 70°C D3: -40°C to 85°C	$\pm$ 0.05 PPM $\pm$ 0.28 PPM $\pm$ 0.37 PPM	$\pm$ 0.01 PPM $\pm$ 0.03 PPM $\pm$ 0.05 PPM
	(Standard, contact factory for different temp ranges and stabilities)	
Freq. stability vs. supply changes	$\pm$ 0.015 PPM Max for $\pm$ 5% Change	$\pm$ 0.010 PPM Max for $\pm$ 5% Change
Initial Calibration at 25°C	1/10 of Freq. Adjustment ( 0.1PPM minimum)	
Freq. stability vs. load changes	$\pm$ 0.01 PPM Max for $\pm$ 5% Change	$\pm$ 0.005 PPM Max for $\pm$ 5% Change
Long term stability (Aging) Typical at 10MHz	$\pm$ 4 PPM Max for 10 Years $\pm$ 0.5 PPM/Year Max $\pm$ 0.005 PPM/Day Max.	$\pm$ 1 PPM Max for 10 Years $\pm$ 0.150 PPM/Year Max $\pm$ 0.002 PPM/Day Max.
Output	HCMOS/TTL/PECL/Sine 0 to +7dBm (Low voltage CMOS Available)	
Harmonics	-25dBc(Sine Output)	
Spurious	-75dBc(Sine Output)	
Duty cycle	40/60% to 60/40%(HCMOS)	
Rise / fall time	. (HCMOS, 10%~90%Vout, 90%~10%Vout) 1 to 10MHz 10nS Max 10 to 30MHz 5nS Max 30 to 77.760MHz 3nS Max	
Short term Stability (Allan Variance)	1 E-10 /Sec	5 E-11 /Sec
Phase Noise Typical at 10MHz Under Static conditions	Offset      Phase Noise 10Hz        -90 dBc/Hz 100Hz       -125 dBc/Hz 1000Hz      -135 dBc/Hz 10000Hz     -150 dBc/Hz	Offset      Phase Noise 10Hz        -110 dBc/Hz 100Hz       -125 dBc/Hz 1000Hz      -140 dBc/Hz 10000Hz     -150 dBc/Hz

The above Specification reflects the typical performance of this family of Oscillators.

Center Frequency, Temperature Stability, Aging, Phase Noise and Frequency Adjustment range are inter-related parameters. There are design trade offs among this critical parameters and is not always possible to optimize all. Raltron Engineering can optimize to a specific requirement. Please consult factory for your application.

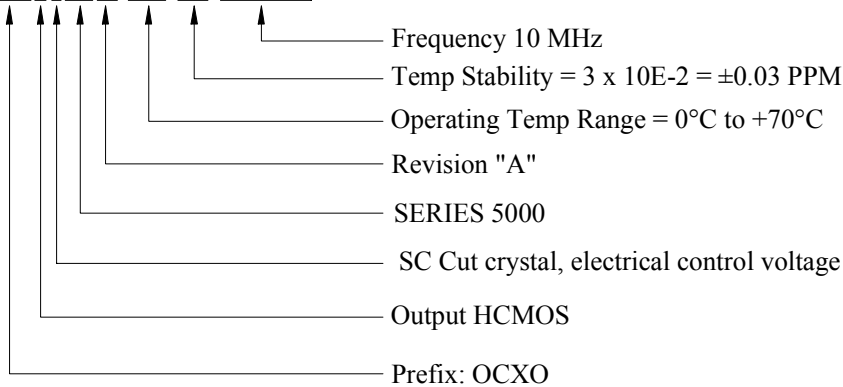
**\*\*NOTE: Not for reflow process\*\***

## ■ HOW TO ORDER (PART NUMBER)

Prefix	Output Type	Cut Type	Series	Revision	Temperature Range	Stability	Frequency
OX	2:HCMOS 4:LVCMOS 6:SINE 8:PECL	0:AT (No Vcontrol) 1: SC (No Vcontrol) 4: AT (Elect Vcontrol) 5: SC (Elect Vcontrol)	50:5000	A	First letter Lowest Temperature, Second letter Highest Temperature: From A=-55°C to Z=+70°C, Then: 1=+75°C, 2=+80°C, 3=+85°C... in 5°C steps Example: LZ: +0°C to +70°C LX: +0°C to +60°C FZ: -30°C to +70°C D3: -40°C to +85°C	Value x 10E-2 in PPM  Example 28= 0.28PPM M  10= 0.1PPM	In MHZ

Example:

### **OX2550A-LZ- 3 -10.000**



## ■ MECHANICAL SPECIFICATION

