

## OCXO SERIES 4000

### ■ FEATURES

**Excellent frequency stability**  
**Mechanical / Electrical frequency adjustment available**

### APPLICATIONS

**- SATCOM**  
**- BASE STATIONS**  
**- TEST INSTRUMENTS**

### ■ ELECTRICAL PERFORMANCE

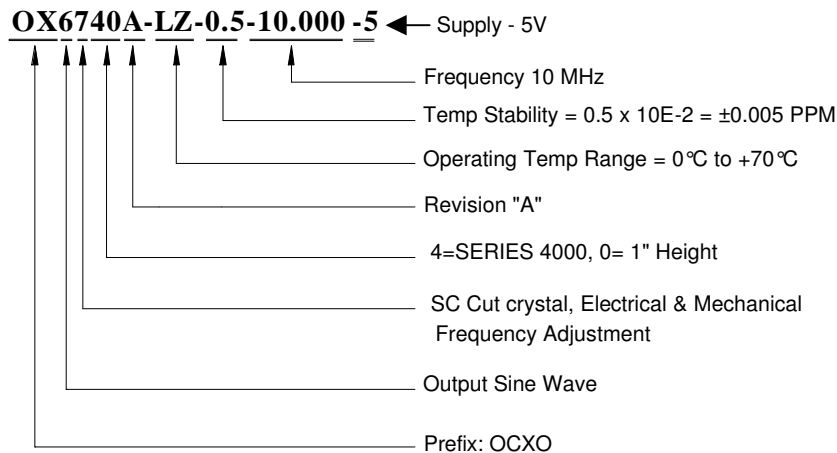
PARAMETER	OCXO SERIES 4000	
	AT CUT CRYSTAL	SC CUT CRYSTAL
Supply voltage, nom.	15V, 12V, 5V ±5% Standard	
Power dissipation steady state	2.5 Watt Max.	
Heat up power	5 Watt Max	
Heat up time.	7 min Max	
Frequency range	1 To 160 MHz Standard	
Frequency Adjustment:		
Electrical (0 to 5V)	±10PPM Min	±0.7PPM Min
Electrical (0 to 10V)	±15PPM Min	±1PPM Min
Mechanical	±1.5PPM Min	±0.6 PPM Min
Freq. stability vs. temperature		
LX: 0°C to 60°C	±0.05 PPM	±0.002 PPM
FZ: -30°C to 70°C	±0.1 PPM	±0.005 PPM
	(Standard, contact factory for different temp ranges and stabilities)	
Freq. stability vs. supply changes	±0.005 PPM Max for ±5% Change	±0.002 PPM Max for ±5% Change
Freq. stability vs. load changes	±0.005 PPM Max for ±5% Change	±0.001 PPM Max for ±5% Change
Long term stability (Aging)	± 1.5 PPM Max for 10 Years ± 0.3 PPM Max for 1 Years ±0.002 PPM/Day Max.	±0.6 PPM Max for 10 Years ±0.05 PPM Max for 1 Years ±0.0005 PPM/Day Max.
Output	HCMOS/TTL/Sine 0 to +13dBm	
Harmonics, Sub Harmonics	-30dBc(Sine Output)	
Spurious	-75dBc(Sine Output)	
Duty cycle	40/60% to 60/40%(HCMOS)	
Rise / fall time	10nS Max. (HCMOS,10%~90%Vout, 90%~10%Vout)	
Short term Stability (10MHz)	1 E-10 /Sec	5 E-11 /Sec
Phase Noise typical under static conditions (Sine Output 10MHZ)	Offset      Phase Noise	Offset      Phase Noise
	10Hz      -95 dBc/Hz	10Hz      -115 dBc/Hz
	100Hz     -125 dBc/Hz	100Hz     -135 dBc/Hz
	1000Hz   -135 dBc/Hz	1000Hz   -145 dBc/Hz
	10000Hz -150 dBc/Hz	10000Hz -150 dBc/Hz

Note: All Typical parameters for a 10MHz output and 5V Supply, for different frequencies consult factory

## ■ HOW TO ORDER (PART NUMBER)

Prefix	Output Type	Cut Type	Series	Revision	Temperature Range	Stability	Frequency	Supply Voltage
OX	1:TTL 2:HCMOS 3:ACMOS 4:LVC MOS 5:100K ECL 6:SINE 7:10K ECL 8: PECL 9:CUSTOM	0:AT (No Vcontrol ) 1: SC (No Vcontrol ) 2: AT (Mechanical Adj) 3: SC (Mechanical Adj) 4: AT (Elect Vcontrol) 5: SC (Elect Vcontrol) 6: AT (Mech & Elect.) 7: SC (Mech & Elect.)	4X:4000 40: Height= 1"/25.4mm 41: Height= 2"/50.8mm 42: Height= 4"/101.6mm 44~49: Odd Height	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  10= 0.1PPM	In MHZ	5: 5V 12; 12V 15; 15V

Example:



## ■ MECHANICAL SPECIFICATION

