

## Oven Controlled Crystal Oscillators (OCXOs)

### OC14



#### Description:

- Stability up to  $\pm 0.1 \times 10^{-6}$
- Low Aging
- Compact Package
- SDH/SONET
- ATM
- WLL
- Measurement Equipment

#### Performance Characteristics

Parameter		OC14					
Frequency Range	$F_0$	1.000MHz~100.000MHz					
Standard Frequency(MHz)	$F_0$	4.096	5	8.192	10	16.384	20
Frequency Accuracy		$\pm 0.5$ PPM (center control voltage)					
Supply Voltage	$V_{DD}$	B:+5.0VDC $\pm 10\%$		C:+12.0VDC $\pm 10\%$			
Supply Consumption	Warming State	2W Max					
	Steady State	1W Max (at 25°C)					
Output Load		A: TTL 15pF B: TTL 50pF	C: CMOS 15pF D: CMOS 50pF	G: Sine Wave			
Output Duty		45%~55%			—		
Control Voltage Range		See Ordering Information					
Frequency Stability $V_s$	Temperature Range	$\pm 1 \times 10^{-7}$ (reference to frequency at 25°C $V_{DD} \pm 5\%$ )					
	Power Supply	$\pm 5 \times 10^{-8}$ ( $V_{DD} \pm 5\%$ )					
	Load	$\pm 2 \times 10^{-8}$ (5% change from 50Ω)					
	Warm up Time	<7min (to be within $\pm 10^{-8} \times F_0$ , $F_0$ Refers to Frequency after 1h operation)					
Rise Time/Fall Time	$T_r/T_f$	10nS Max			—		
Output Level	"0"Level	$V_{OL}$	0.4V Max	10% $V_{DD}$		>0dBm//50Ω	
	"1"Level	$V_{OH}$	2.4V Min	90% $V_{DD}$			
Storage Temperature Range	$T_{STG}$	-40°C~+100°C					
Aging (After 30 days, at+25°C)		A: $\pm 1 \times 10^{-6}$ /year / $\pm 5 \times 10^{-6}$ /10 year					
Phase Noise (at 10MHz)		10Hz	100Hz	1KHz	10KHz		
		-100dBc/Hz	-120dBc/Hz	-135dBc/Hz	-145dBc/Hz		
Slope and Linearity		Positive / $\pm 10\%$					

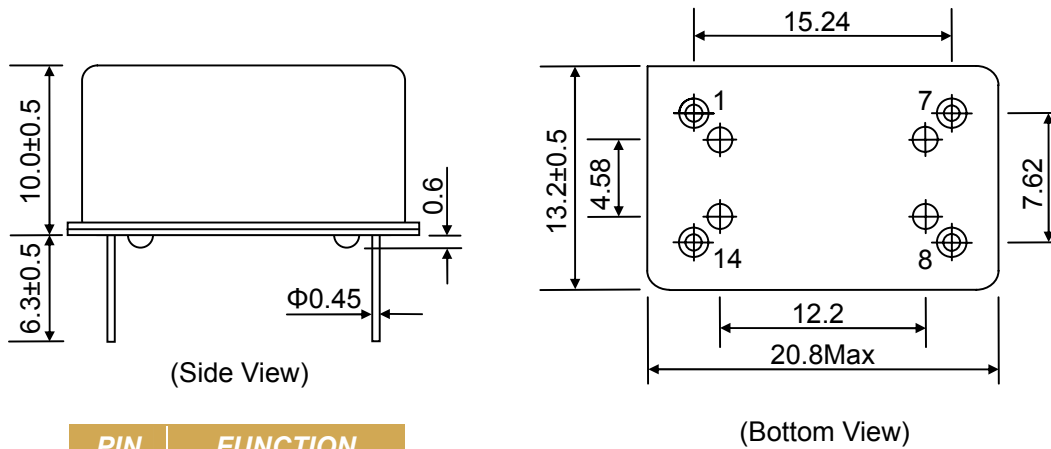
#### Frequency Stability Over Temperature Range

Temperature Range	Frequency Stability			
	E: $\pm 1 \times 10^{-7}$	F: $\pm 2 \times 10^{-7}$	G: $\pm 3 \times 10^{-7}$	H: $\pm 5 \times 10^{-7}$
A:0°C~+50°C	●	●	●	●
B:-10°C~+60°C		●	●	●
C:-20°C~+70°C		●	●	●
E:-40°C~+75°C				●

## Oven Controlled Crystal Oscillators (OCXOs)

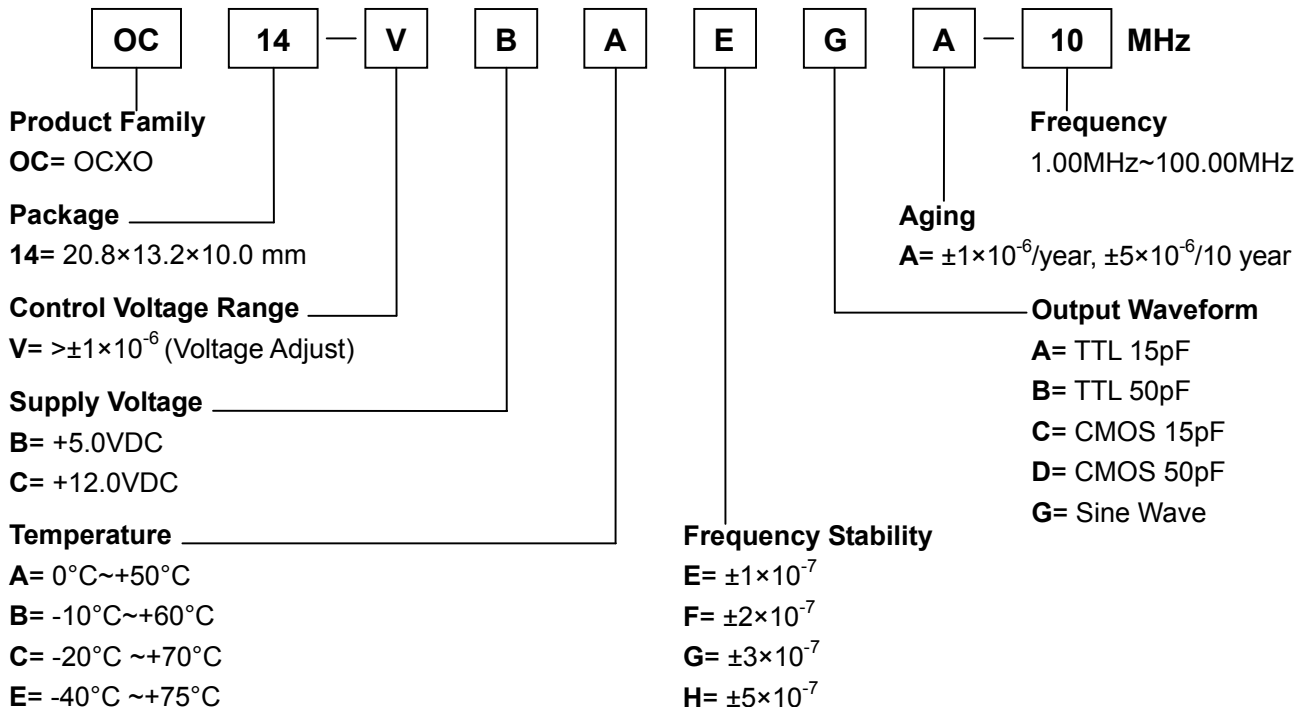
### OC14

#### Outline Drawing (mm)



PIN	FUNCTION
#1	Control Voltage
#7	GND
#8	Output
#14	+DC

#### Ordering Information



#### Ordering Example

##### OC14-VBAEGA-10MHz

OCXO / >±1×10<sup>-6</sup> (Voltage Adjust) / +5.0VDC / 0°C~+50°C / ±1×10<sup>-7</sup> / Sine Wave / ±1×10<sup>-6</sup>/year, ±5×10<sup>-6</sup>/10 year / 10MHz