

Oven Controlled Crystal Oscillators (OCXOs)

OC50



Description:

- Stability up to $\pm 0.005 \times 10^{-6}$
- Low Aging
- Compact Package
- PCS Base Stations
- Cellular Base Stations
- Synthesizer
- Measurement Equipment
- Digital Switching

Performance Characteristics

Parameter		OC50					
Frequency Range	F_0	1.000MHz~160.000MHz					
Standard Frequency(MHz)	F_0	4.096	5	8.192	10	16.384	20
Frequency Accuracy		± 0.1 PPM (center control voltage)					
Supply Voltage	V_{DD}	B:+5.0VDC $\pm 10\%$			C:+12.0VDC $\pm 10\%$		
Supply Consumption	Warming State	5W Max					
	Steady State	2W 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	$\pm 3 \times 10^{-8}$ (reference to frequency at 25°C $V_{DD} \pm 5\%$)					
	Power Supply	$\pm 1 \times 10^{-8}$ ($V_{DD} \pm 5\%$)					
	Load	$\pm 1 \times 10^{-8}$ (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)		B: $\pm 5 \times 10^{-9}$ /day / $\pm 5 \times 10^{-7}$ /year / $\pm 3 \times 10^{-6}$ /10 year C: $\pm 1 \times 10^{-9}$ /day / $\pm 1 \times 10^{-7}$ /year / $\pm 1 \times 10^{-6}$ /10 year					
Phase Noise (at 10MHz)	1Hz	10Hz	100Hz	1KHz	10KHz		
	-80dBc/Hz	-120dBc/Hz	-140dBc/Hz	-145dBc/Hz	-150dBc/Hz		
Internal Reference Voltage		4V ± 0.08 ($V_{DD}=5V$)			8V ± 0.16 ($V_{DD}=12V$)		
Slope and Linearity		Positive / $\pm 10\%$					

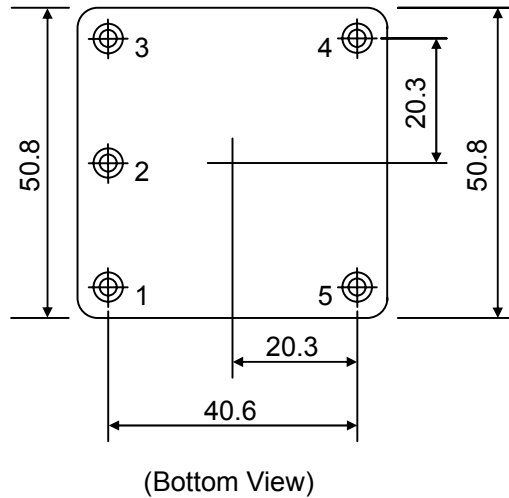
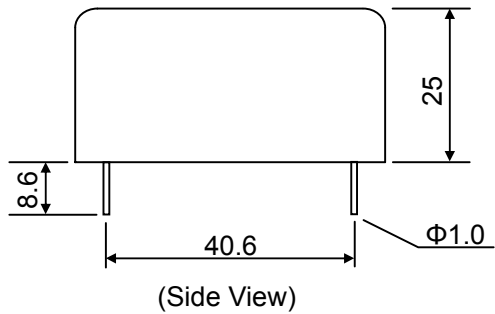
Frequency Stability Over Temperature Range

Temperature Range	Frequency Stability				
	A: $\pm 5 \times 10^{-9}$	B: $\pm 1 \times 10^{-8}$	D: $\pm 5 \times 10^{-8}$	E: $\pm 1 \times 10^{-7}$	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)

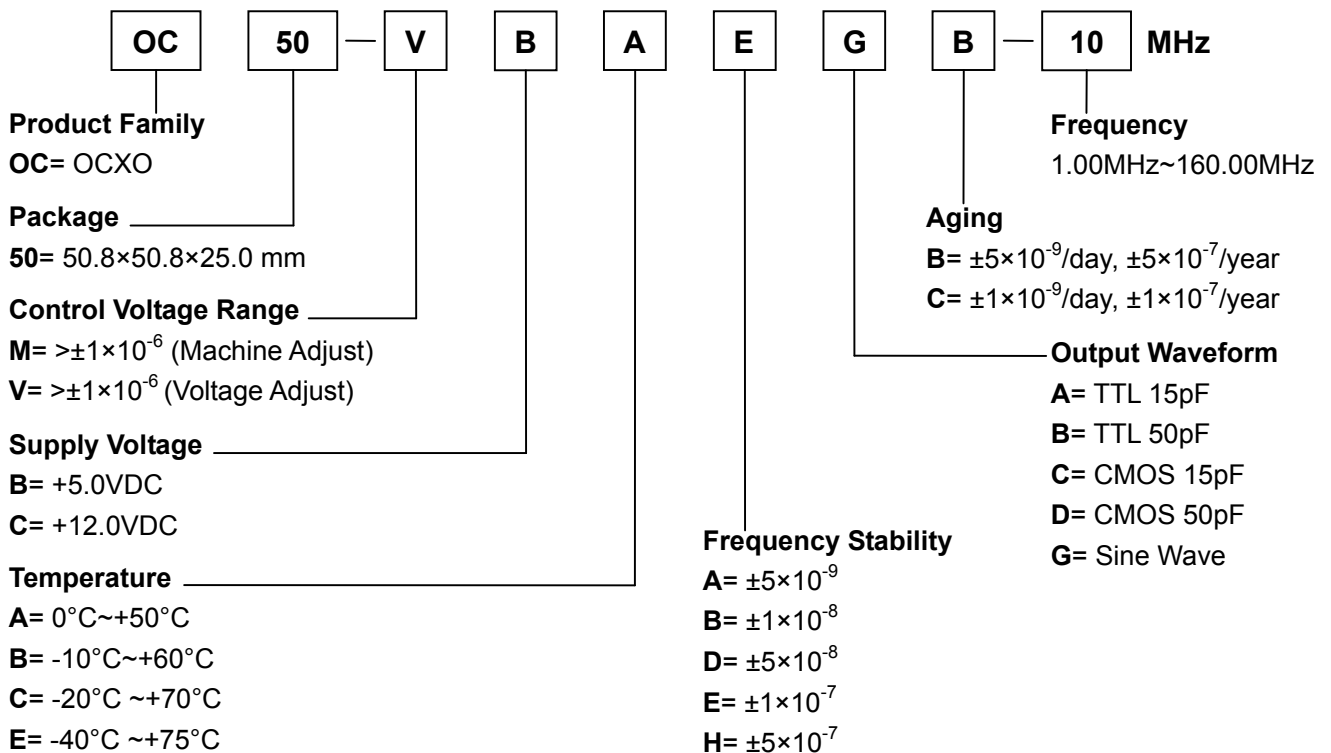
OC50

Outline Drawing (mm)



PIN	FUNCTION
#1	Control Voltage
#2	Reference Voltage/NC
#3	Output
#4	GND
#5	+DC

Ordering Information



OCXO's

Ordering Example

OC50-VBAEGB-10MHz

OCXO / $\geq \pm 1 \times 10^{-6}$ (Voltage Adjust) / +5.0VDC / 0°C~+50°C / $\pm 1 \times 10^{-7}$ / Sine Wave / $\pm 5 \times 10^{-9}$ /day, $\pm 5 \times 10^{-7}$ /year / 10MHz