

Oven Controlled Crystal Oscillators (OCXOs)

OC20



Description:

- Stability up to $\pm 0.05 \times 10^{-6}$
- Low Aging
- Compact Package
- PCS Base Stations
- Cellular Base Stations
- Synthesizer
- Measurement Equipment
- Digital Switching

Performance Characteristics

Parameter		OC20					
Frequency Range	F_0	1.000MHz~100.000MHz					
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	3.6W Max					
	Steady State	1.5W 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	$\pm 2 \times 10^{-7}$ (reference to frequency at 25°C $V_{DD} \pm 5\%$)					
	Power Supply	$\pm 5 \times 10^{-9}$ ($V_{DD} \pm 5\%$)					
	Load	$\pm 5 \times 10^{-9}$ (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 / $\pm 10\%$					

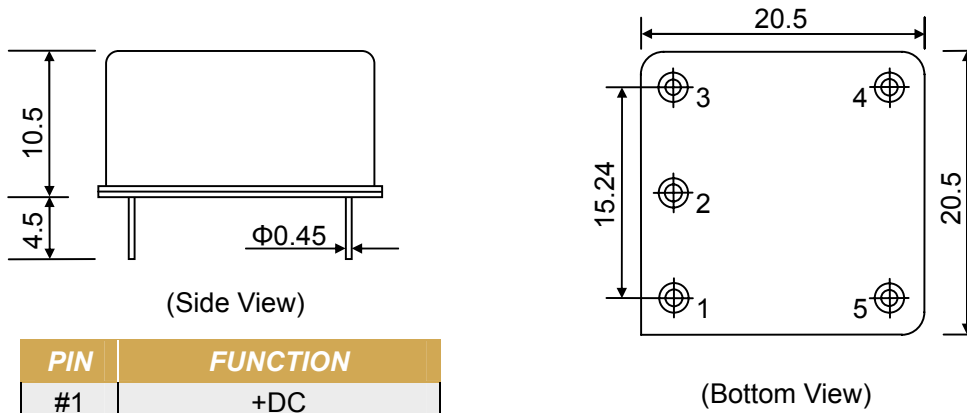
Frequency Stability Over Temperature Range

Temperature Range	Frequency Stability				
	D: $\pm 5 \times 10^{-8}$	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				●	●

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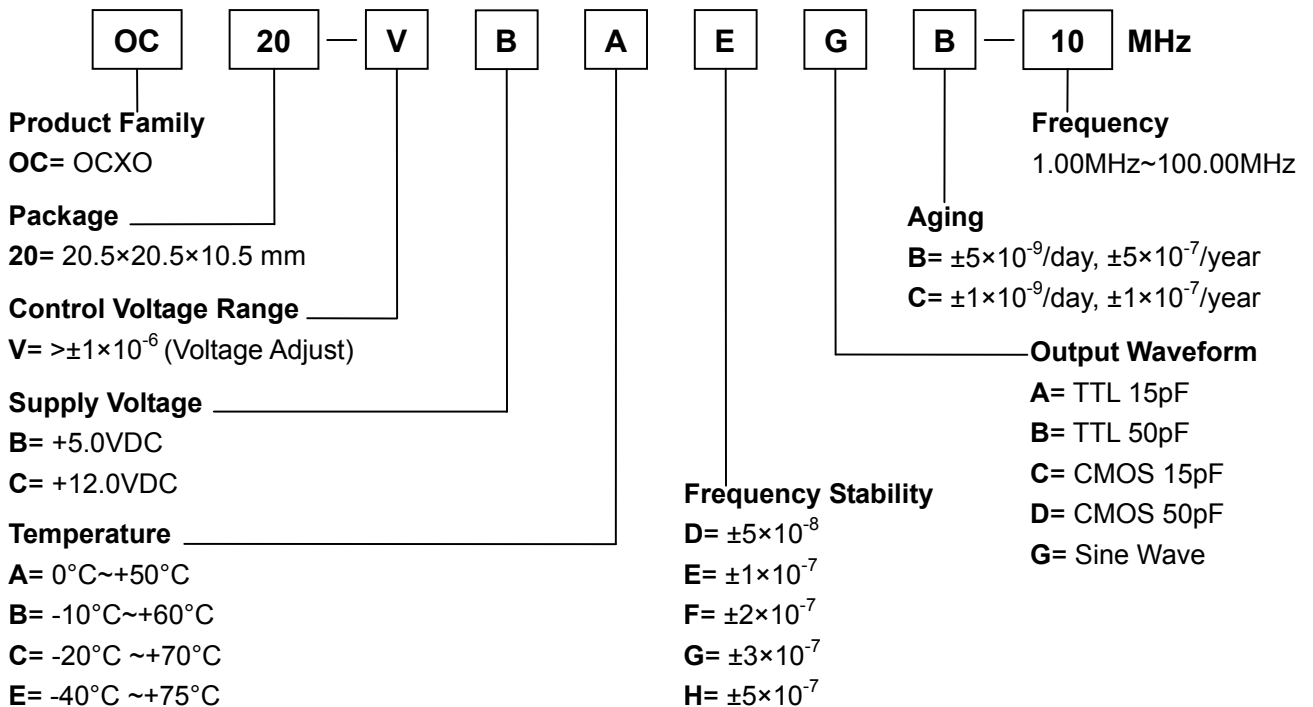
OC20

Outline Drawing (mm)



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

Ordering Information



Ordering Example

OC20-VBAEGB-10MHz

OCXO / $>\pm 1 \times 10^{-6}$ (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