

压控振荡器 Voltage Controlled Crystal Oscillator: KV508C KV708C

Feature 特征

- VCXO allow for precise frequency tuning over typical range $\pm 50\sim 200\text{ppm}$ by adjusting the voltage on the control (Vc) pin 压控晶振可以通过调节控制引脚上的电压进行微调，频率微调范围为 $\pm 50\sim 200\text{ppm}$
- HCSL differential output for high-speed clock distribution HCSL 差分输出，适用于高速时钟分配和同步应用
- Low phase jitter for precision timing 低相位抖动，确保质量信号和系统稳定性
- Ideal for networking, data communication, and high-performance computing 适用于网络通信，高速数据传输，高性能计算等



General Specifications 规格参考

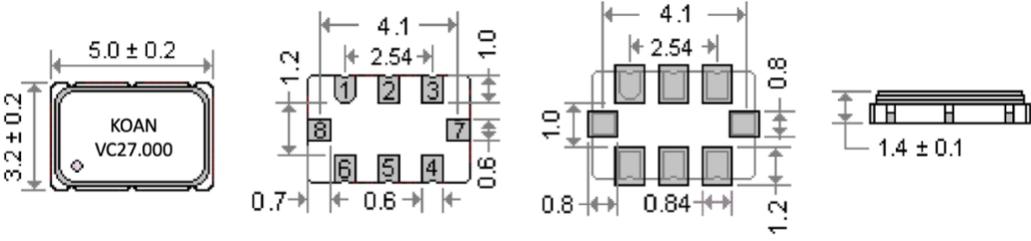
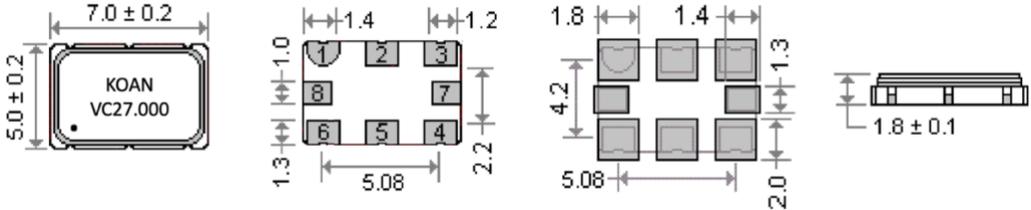
PARAMETER	性能参数	KV508C KV708C		
Frequency Range	频率范围	15.0 ~ 700.0MHz		
Supply Voltage	供给电压	+1.8V ($\pm 10\%$)	+2.5V ($\pm 10\%$)	+3.3V ($\pm 10\%$)
Center Control Voltage	中心控制电压	0.9Vdc (0V~1.8V)	1.25Vdc (0.25V~2.25V)	1.65Vdc (0.3V~3.0V)
Output Logic	输出波形	HCSL		
Output Load	输出负载	50Ω to Ground		
Frequency Tolerance	调整频差	$\pm 20\text{ppm}$		
Current Consumption	工作电流	100mA max.		
Output Logic High "1"	输出电平 高	0.66V~1.15V		
Output Logic Low "0"	输出电平 低	0.0V~0.15V		
Frequency Pulling Range	压控范围	$\pm 50\sim 200\text{ppm}$		
Integrated Phase Jitter	抖动	151fs RMS Phase Jitter typ. @1480MHz(12KHz~20MHz)		
Input Impedance	输入电阻	5MΩ typical		
Rise & Fall Time	上升下降时间	0.8ns max.		
Start-up Time	起振时间	10ms max.		
Output Enable/Disable Time	启动/禁用时间	Enable: 2.5ms max. Disable: 10μs max.		
Linearity	非线性误差	1% typ.; 10% max.		
Duty Cycle	占空比	45~55% ($f \leq 40\text{MHz}$); 40~60% ($f > 40\text{MHz}$)		
Modulation Bandwidth (-3dB)	调制宽带	10KHz min.		
Aging Per Year	老化率	$\pm 3\text{ppm} \sim \pm 5\text{ppm}/\text{year}$		
Storage Temperature Range	储存温度范围	$-55^\circ\text{C} \sim +125^\circ\text{C}$		

Frequency Stability 温度频差 VS Operating Temperature Range 温度范围

Temp. Code	Temp. ppm	± 20	± 25	± 30	± 50	± 100
B	-20~70°C	○	○	○	○	○
C	-40~85°C		○	○	○	○
E	-40~105°C				○	○
F	-55~125°C					○

NOTE: Please consult for other specifications 若有其它规格需求请告知

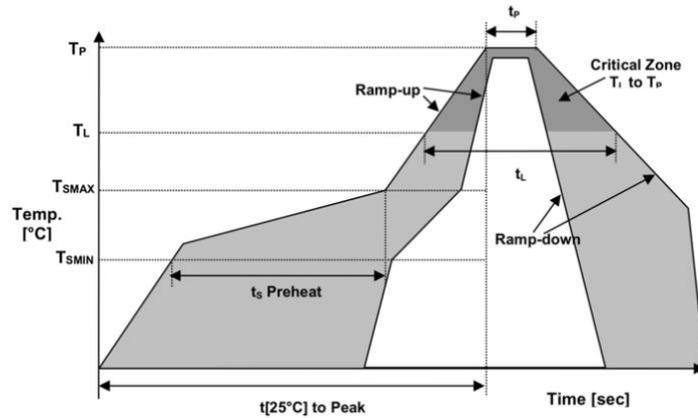
■ Outline Dimensions (Unit: mm) 外形尺寸

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■ Part Number Guide 产品编号

KV508C	-	27.000	-	100	-	33	-	C	-	30	-	NS
↓		↓		↓		↓		↓		↓		↓
型号	-	标称频率	-	压控范围	-	工作电压	-	工作温度	-	温度频差	-	特殊要求
‘KV’: 压控系列				50=±50ppm				B: -20~+70°C		10 = ±10ppm		
‘508’: 封装尺寸				80=±80ppm		18=1.8V		C: -40~+85°C		20 = ±20ppm		
5.0x3.2mm 8-pad		(In MHz)		100=±100ppm		25=2.5V		E: -40~+105°C		30 = ±30ppm		‘NS’:特殊要求
‘C’: 输出波形				150=±150ppm		33=3.3V		F: -55~+125°C		50 = ±50ppm		
HCSL				200=±200ppm						100 = ±100ppm		

■ Reflow Profile 回流焊



Temperature Min Preheat	最低预热温度	T_{smin}	150°C
Temperature Max preheat	最高预热温度	T_{smax}	200°C
Time (T_{smin} to T_{smax})	时间差	T_s	60~120 sec
Temperature	温度	T_L	217°C
Peak Temperature	最高温	T_p	260 °C
Ramp-up Rate	升温速度	R_{up}	3°C/sec max
Ramp-down Rate	降温速度	R_{down}	6°C/sec max
Time within 5°C of Peak Temperature	最高温度停留时间	t_p	30 sec
Time t[25°C] to peak temperature	25度到最高温度时间	t[25°C] to peak	480 sec
Time	时间	t_L	60~150 sec