压控振荡器 Voltage Controlled Crystal Oscillator: KV508D KV708D

Feature 特征

- VCXO allow for precise frequency tuning over typical range ±50~200ppm 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±50~±200ppm
- LVDS differential output for high-speed, low-noise transmission LVDS 差分输出，适用于高速，低噪声信号传输
- Low phase jitter for clean signal integrity 低相位抖动，确保质量信号和系统稳定性
- Ideal for clock synchronization in networking, industrial, and A/V systems 适用于网络通信，工业控制，音频系统中的时钟同步应用

General Specifications 规格参考

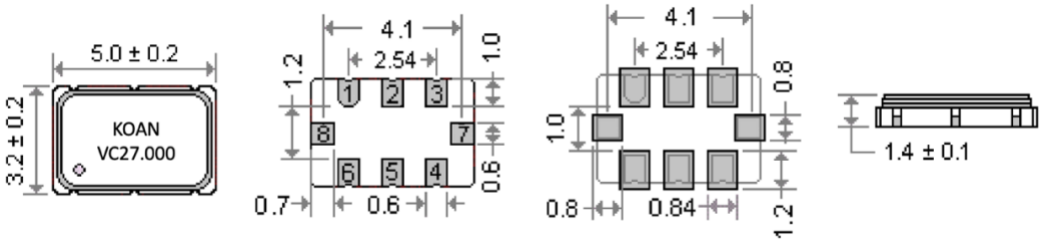
PARAMETER	性能参数	KV508D KV708D	
Frequency Range	频率范围	15.0MHz ~ 2.1GHz	
Supply Voltage	供给电压	+2.5V (±10%)	+3.3V (±10%)
Center Control Voltage	中心控制电压	1.25Vdc (0.25V~2.25V)	1.65Vdc (0.3V~3.0V)
Output Logic	输出波形	LVDS	
Output Load	输出负载	100Ω between OUT and OUTN	
Frequency Tolerance	调整频差	±20ppm	
Current Consumption	工作电流	90mA max.	
Output Logic High "1" Output Logic Low "0"	输出电平 高 输出电平 低	1.4V typ. 1.6V max. 1.1V typ. 0.9V min.	
Frequency Pulling Range	压控范围	±50~±200ppm	
Integrated Phase Jitter	抖动	163fs RMS Phase Jitter typ. @2000MHz (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≤40MHz); 40~60% (f > 40MHz)	
Modulation Bandwidth (-3dB)	调制宽带	10KHz min.	
Aging Per Year	年老化率	±3ppm ~ ±5ppm/year	
Storage Temperature Range	储存温度范围	-55°C ~ +125°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					○

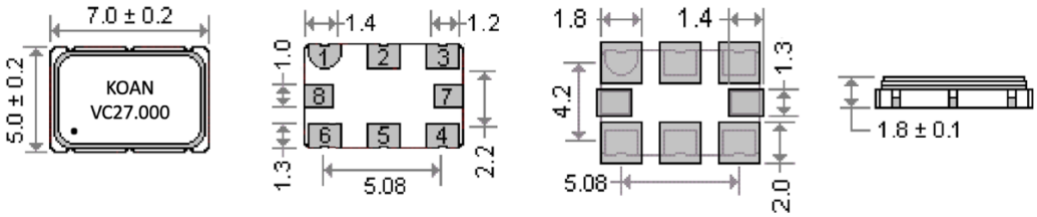
NOTE: Please consult for other specifications 若有其它规格需求请告知

■ Outline Dimensions (Unit: mm) 外形尺寸

KV508D



KV708D

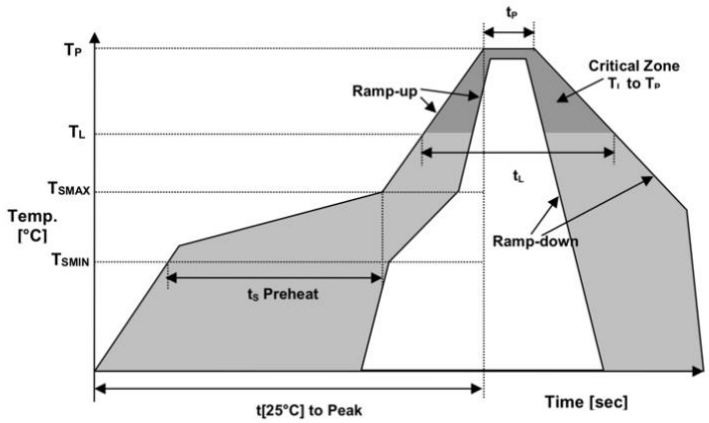


Pin	Connection
#1	Control Voltage
#2	Tri-State
#3	Ground
#4	CMOS: Output; PECL or LVDS: Differential
#5	CMOS: N.C.; PECL or LVDS: Complementary
#6	Supply Voltage
#7	Do not Connect
#8	Do not Connect

■ Part Number Guide 产品编号

KV508D	-	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 **'508':** 封装尺寸 5.0x3.2mm 8-pad **'D'**: 输出波形 LVDS		(In MHz)		50=±50ppm 80=±80ppm 100=±100ppm 150=±150ppm 200=±200ppm		25=2.5V 33=3.3V		B: -20~+70°C C: -40~+85°C E: -40~+105°C F: -55~+125°C		10 = ±10ppm 20 = ±20ppm 30 = ±30ppm 50 = ±50ppm 100 = ±100ppm		'NS':特殊要求

■ 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