

Voltage Controlled Clock Oscillator (压控振荡器) - KV508D/KV708D

Feature 特征

Frequency pulling range from $\pm 50 \sim \pm 200$ ppm with ultra-low RMS phase jitter 压控范围 $\pm 50 \sim \pm 200$ ppm, 低相位抖动

Applications 应用

Frequency electrical calibration, high-frequency network application system, military anti-interference communication 频率电校准, 高频网络应用系统, 军事防干扰通讯

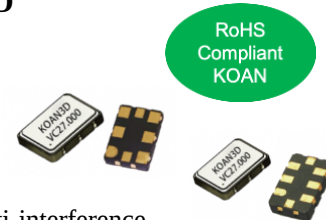
General Specifications 规格参考

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 ($\pm 10\%$)	+3.3V ($\pm 10\%$)
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	100 Ω between OUT and OUTN	
Frequency Tolerance	调整频差	± 20 ppm	
Current Consumption	工作电流	75mA typ. 90mA max.	
Output Logic High "1"	输出电平 高	1.4V typ. 1.6V max	
Output Logic Low "0"	输出电平 低	1.1V typ. 0.9V min	
Frequency Pulling Range	压控范围	$\pm 50 \sim \pm 200$ ppm	
Integrated Phase Jitter	抖动	163fs RMS Phase Jitter typ. @2000MHz (12KHz~20MHz)	
Input Impedance	输入电阻	5M Ω typical	
Rise & Fall Time	上升下降时间	0.5ns max	
Start-up Time	起振时间	5ms typ.; 10ms max	
Output Enable/Disable Time	启动/禁用时间	Enable: 2.5ms max Disable: 10 μ s max	
Linearity	非线性误差	1% typ.; 10% max	
Duty Cycle	占空比	45~55%	
Modulation Bandwidth (-3dB)	调制宽带	10KHz min.	
Aging Per Year	年化率	± 3 ppm~ ± 5 ppm/year	
Storage Temperature Range	储存温度范围	-55 $^{\circ}$ C ~ +125 $^{\circ}$ C	

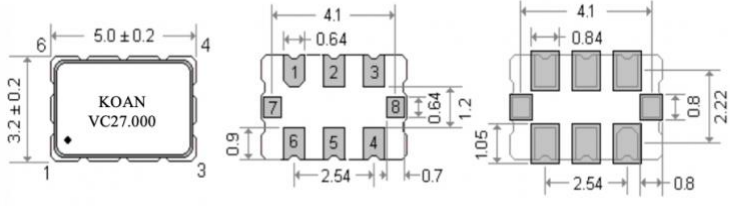
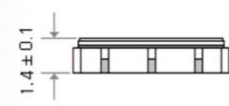
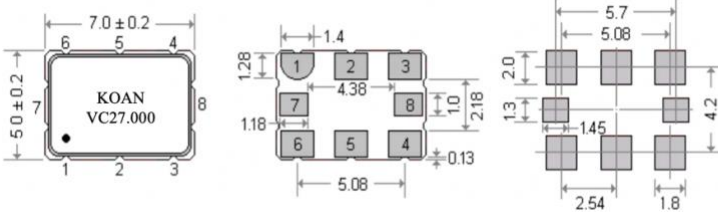
Frequency Stability 温度频差 VS Operating Temperature Range 温度范围

Temp. Code	Temp.\ppm	± 10	± 20	± 30	± 50	± 100
B	-20~70 $^{\circ}$ C	○	○	○	○	○
C	-40~85 $^{\circ}$ C		○	○	○	○
D	-55~85 $^{\circ}$ C			○	○	○
E	-55~105 $^{\circ}$ C				○	○
F	-55~125 $^{\circ}$ C				○	○

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



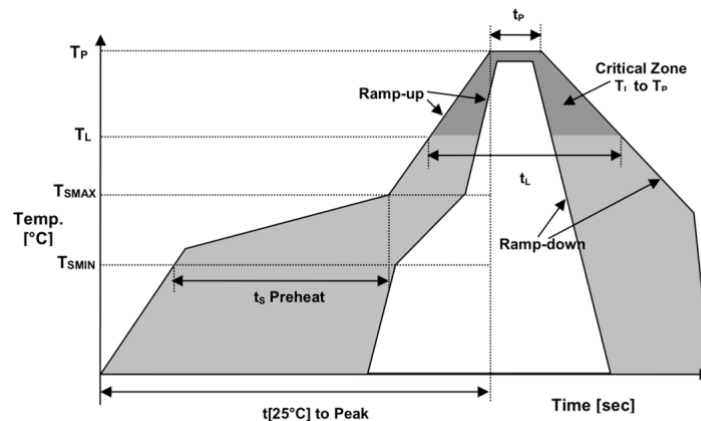
■ Outline Dimensions (Unit: mm) 外形尺寸

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■ Part Number Guide 产品编号

<u>KV</u> ↓	<u>708</u> ↓	<u>D</u> ↓	-	<u>622.080</u> ↓	-	<u>100</u> ↓	-	<u>33</u> ↓	-	<u>C</u> ↓	-	<u>30</u> ↓	-	<u>NS</u> ↓
系列	封装	输出波形	-	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=VCXO 压控振荡器	封装尺寸 70=7050 50=5032 32=3225 8=8 pad	“ ”=低频 CMOS T=高频 CMOS D=LVDS	-	(In MHz)	-	50 = ±50ppm 100=±100ppm 150=±150ppm 200=±200ppm	-	25=2.5V 33=3.3V	-	B: -20~+70°C C: -40~+85°C D: -55~+85°C E: -55~+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

■ Revision 版本

版本 Rev.	修改页 Revise Page	修改内容 Revise Contents	日期 Date	修改人 Reviser
1.0	NA	-	2021.12.25	JH