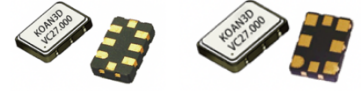


压控振荡器 Voltage Controlled Crystal Oscillator: KV508T KV708T

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 $\pm 50\sim 200\text{ppm}$
- CMOS output with ultra-low RMS phase jitter CMO 输出具有超低相位抖动，信号完整性好
- 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

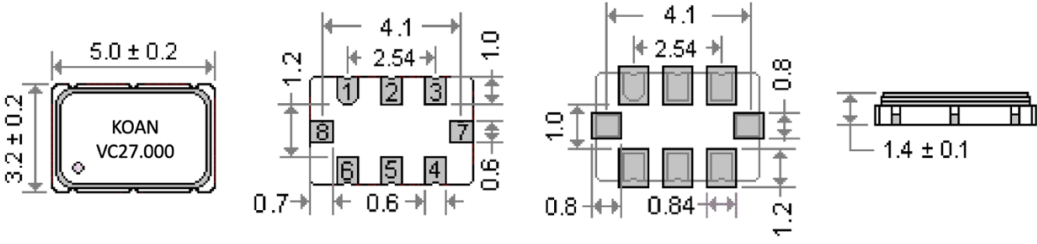
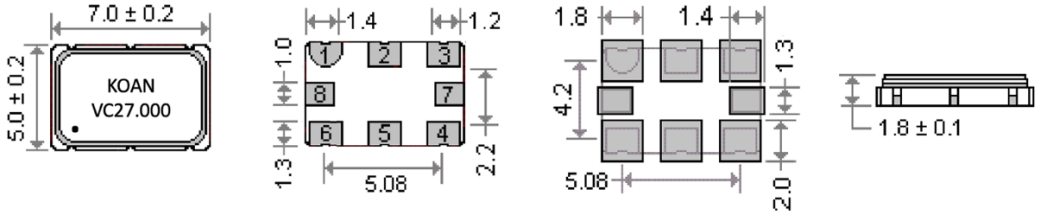
PARAMETER	性能参数	KV508T KV708T		
Frequency Range	频率范围	10.0~245.0MHz		
Supply Voltage	供电电压	+1.8V ($\pm 10\%$)	+2.5V ($\pm 10\%$)	+3.3V ($\pm 10\%$)
Center Control Voltage	中心控制电压	0.9Vdc (0V~1.8V)	1.25Vdc (0.25V~2.25V)	1.65Vdc (0.3V~3.0V)
Output Logic	输出波形	CMOS		
Output Load	输出负载	15pF		
Frequency Tolerance	调整频差	$\pm 20\text{ppm}$		
Current Consumption	工作电流	70mA typical @50MHz; 80mA typical @250MHz		
Output Logic High "1"	输出电平 高	0.9Vdd min		
Output Logic Low "0"	输出电平 低	0.1Vdd max		
Frequency Pulling Range	压控范围	$\pm 50\sim 200\text{ppm}$		
Integrated Phase Jitter	抖动	159fs RMS Phase Jitter typ.@156.250MHz (12KHz~20MHz)		
Input Impedance	输入电阻	5M Ω typical		
Rise & Fall Time	上升下降时间	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	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	± 10	± 20	± 30	± 50	± 100
B	-20~70 $^{\circ}\text{C}$	o	o	o	o	o
C	-40~85 $^{\circ}\text{C}$		o	o	o	o
D	-55~85 $^{\circ}\text{C}$			o	o	o
E	-55~105 $^{\circ}\text{C}$				o	o
F	-55~125 $^{\circ}\text{C}$				o	o

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

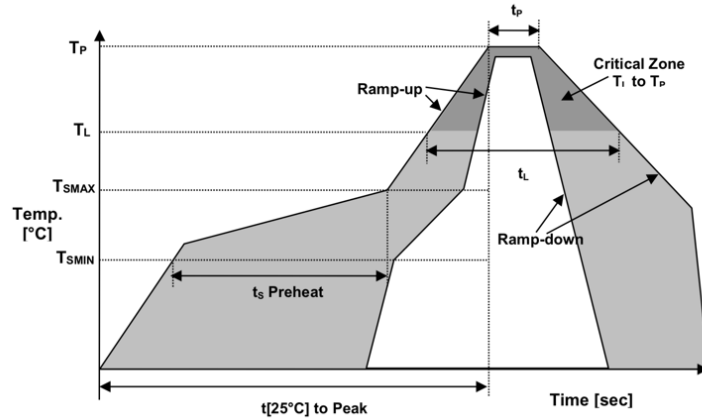
■ Outline Dimensions (Unit: mm) 外形尺寸

<p>KV508T</p>																			
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	<table border="1" data-bbox="669 1144 1101 1438"> <thead> <tr> <th>Pin</th> <th>Connection</th> </tr> </thead> <tbody> <tr> <td>#1</td> <td>Control Voltage</td> </tr> <tr> <td>#2</td> <td>Tri-State</td> </tr> <tr> <td>#3</td> <td>Ground</td> </tr> <tr> <td>#4</td> <td>CMOS: Output; PECL or LVDS: Differential</td> </tr> <tr> <td>#5</td> <td>CMOS: N.C.; PECL or LVDS: Complementary</td> </tr> <tr> <td>#6</td> <td>Supply Voltage</td> </tr> <tr> <td>#7</td> <td>Do not Connect</td> </tr> <tr> <td>#8</td> <td>Do not Connect</td> </tr> </tbody> </table>	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
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■ Part Number Guide 产品编号

KV508T	-	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		D: -55~+85°C		30 = ±30ppm		'NS':特殊要求
'T': 输出波形				150=±150ppm		33=3.3V		E: -55~+105°C		50 = ±50ppm		
CMOS				200=±200ppm				F: -55~+125°C		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

■ Revision 版本

版本 Rev.	修改页 Revise Page	修改内容 Revise Contents	日期 Date	修改人 Reviser
0	N/A	Initial issue	2021.12.25	JZ