

压控振荡器 Voltage Controlled Crystal Oscillator: KV25 KV32 KV50 KV70

Feature 特征

- VCXO allow for precise frequency tuning over typical range $\pm 80\sim 200\text{ppm}$ 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 $\pm 80\sim \pm 200\text{ppm}$
- Ideal for systems requiring frequency alignment and synchronization 适用于频率同步和微调系统



General Specifications 规格参考

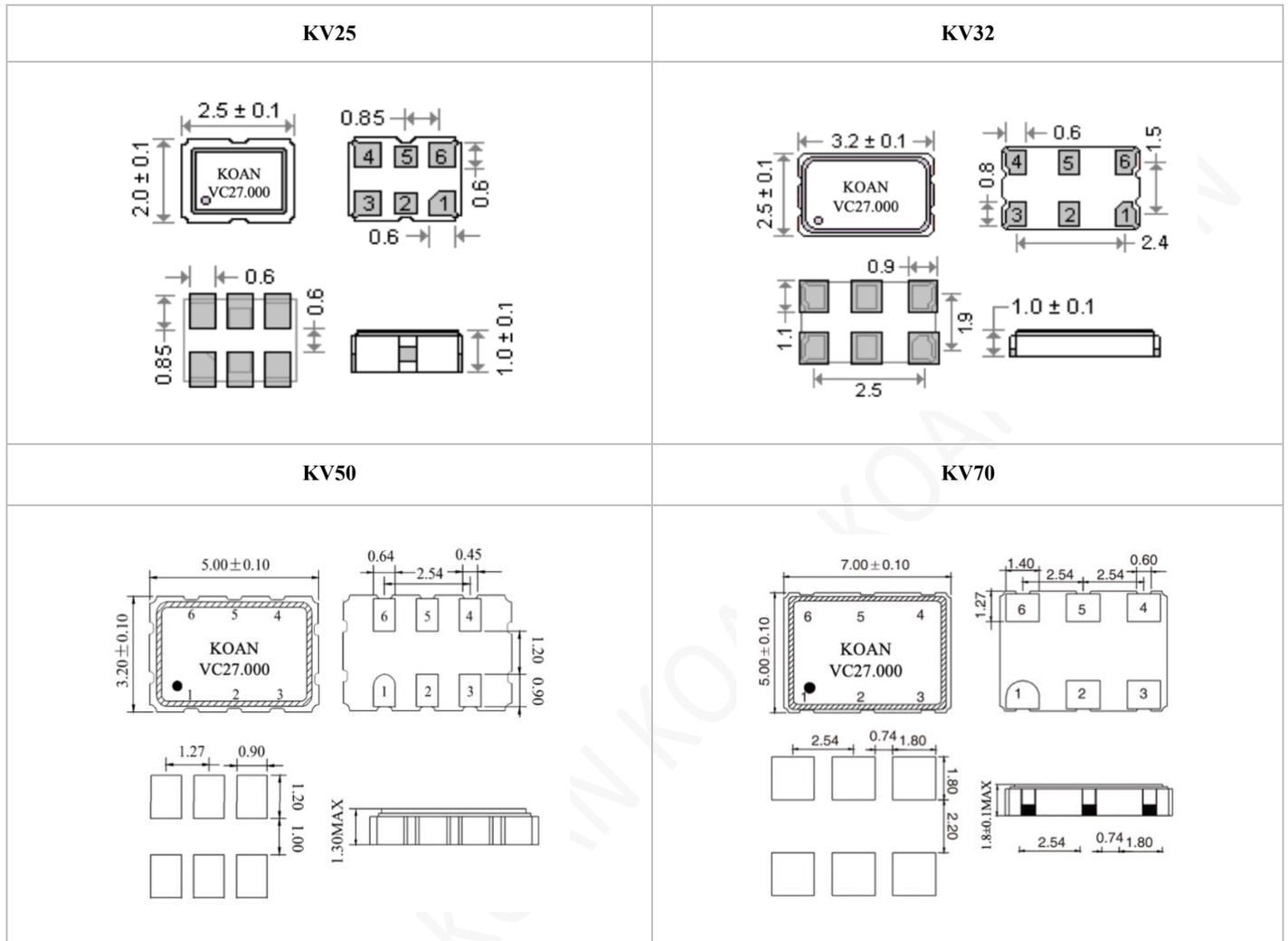
PARAMETER	性能参数	KV25 KV32 KV50 KV70			
Frequency Range	频率范围	4.0~50.0MHz			
Supply Voltage	供电电压	+1.8V ($\pm 10\%$)	+2.5V ($\pm 10\%$)	+3.3V ($\pm 10\%$)	+5.0V ($\pm 10\%$)
Center Control Voltage	中心控制电压	0.9Vdc (0V~1.8V)	1.25Vdc (0.25V~2.25V)	1.65Vdc (0.3V~3.0V)	2.5Vdc (0.5V~4.5V)
Output Logic	输出波形	CMOS			
Output Load	输出负载	15pF			
Frequency Tolerance	调整频差	$\pm 20\text{ppm}$			
Current Consumption	工作电流	40mA max.			
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	$\pm 80\sim \pm 200\text{ppm}$			
Integrated Phase Jitter	抖动	1ps max (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	10ms max.			
Output Enable/Disable Time	启动/禁用时间	Enable: 2ms max. Disable: 100ns max.			
Linearity	非线性误差	6% typical, 10% max.			
Duty Cycle	占空比	45~55% (f \leq 40MHz); 40~60% (f > 40MHz)			
Modulation Bandwidth (-3dB)	调制宽带	10KHz min. (Vcontrol=1.65V/2.5V)			
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 $^{\circ}\text{C}$	o	o	o	o	o
C	-40~85 $^{\circ}\text{C}$		o	o	o	o
E	-40~105 $^{\circ}\text{C}$				o	o
F	-55~125 $^{\circ}\text{C}$					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

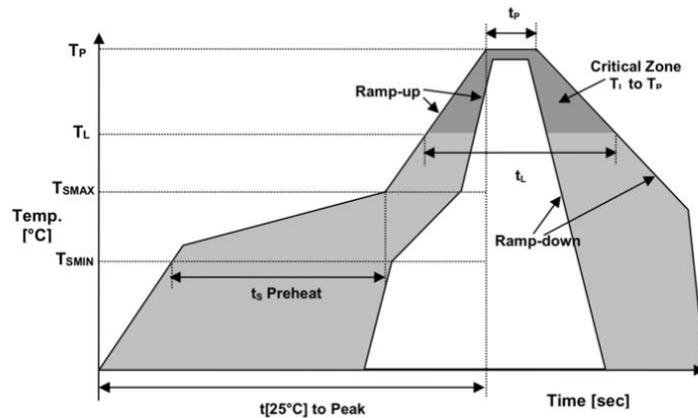


Pin	Connection
#1	Control Voltage
#2	Tri-State
#3	Ground
#4	CMOS: Output; PECL or LVDS: Differential
#5	CMOS: N.C.; PECL or LVDS: Complementary
#6	Supply Voltage

Part Number Guide 产品编号

<u>KV25</u>	-	<u>27.000</u>	-	<u>80</u>	-	<u>33</u>	-	<u>C</u>	-	<u>30</u>	-	<u>NS</u>
↓		↓		↓		↓		↓		↓		↓
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				80=±80ppm		18=1.8V		B: -20~+70°C		10 = ±10ppm		
‘25’: 封装尺寸		(In MHz)		100=±100ppm		25=2.5V		C: -40~+85°C		20 = ±20ppm		‘NS’:特殊要求
2.5x2.0mm				150=±150ppm		33=3.3V		E: -40~+105°C		30 = ±30ppm		
				200=±200ppm		50=5.0V		F: -55~+125°C		50 = ±50ppm		
										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 $t[25^\circ\text{C}]$ to peak temperature	25度到最高温度时间	$t[25^\circ\text{C}]$ to peak	480 sec
Time	时间	t_L	60~150 sec