

## Voltage Controlled Crystal Oscillator (压控振荡器) - KV25

### Feature 特征

- Frequency pulling range from  $\pm 80 \sim \pm 200$ ppm 压控范围从 $\pm 80$  到 $\pm 200$ ppm

### 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



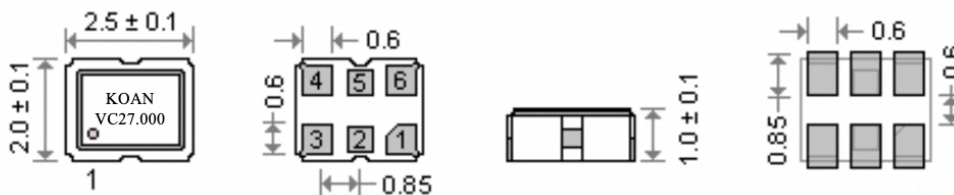
### General Specifications 规格参考

PARAMETER	性能参数	KV25			
Nominal Frequency	标称频率	4.000~50.000MHz			
Supply Voltage	供给电压	+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	$\pm 20$ ppm			
Current Consumption	工作电流	20mA 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	$\pm 80 \sim \pm 200$ ppm			
Integrated Phase Jitter	抖动	1ps max (12KHz~20MHz)			
Input Impedance	输入电阻	1M $\Omega$ typical			
Rise & Fall Time	上升下降时间	10ns max			
Start-up Time	起振时间	5ms typical, 10ms max			
Linearity	非线性误差	$\pm 6\%$ typical, $\pm 10\%$ max			
Duty Cycle	占空比	45~55%			
Modulation Bandwidth (-3dB)	调制宽带	10KHz min. (Vcontrol=1.65V/2.5V)			
Aging Per Year	老化率	$\pm 3$ ppm~ $\pm 5$ ppm/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	$\pm 10$	$\pm 20$	$\pm 30$	$\pm 50$	$\pm 100$
B	-20~70 $^{\circ}\text{C}$	o	o	o	o	o
C	-40~85 $^{\circ}\text{C}$		o	o	o	o
D	-20~105 $^{\circ}\text{C}$			o	o	o
E	-40~105 $^{\circ}\text{C}$				o	o
F	-55~105 $^{\circ}\text{C}$					o
G	-20~125 $^{\circ}\text{C}$					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



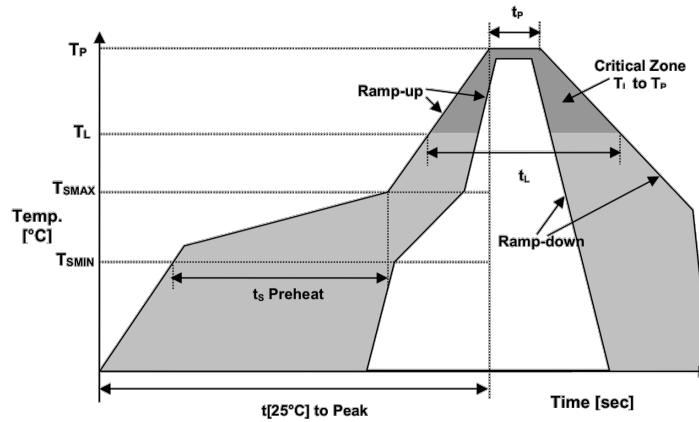
Pin	Connection
#1	Vcontrol
#2	Tri-State
#3	GND
#4	Output
#5	N.C.
#6	VDD

## Part Number Guide 产品编号

**KV25** - **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': 产品系列 '25': 封装尺寸 SMD 2.5x2.0mm	(In MHz)	80=±80ppm 100=±100ppm 150=±150ppm 200=±200ppm	18=1.8V 25=2.5V 33=3.3V 50=5.0V	B: -20~+70°C C: -40~+85°C D: -20~+105°C E: -40~+105°C F: -55~+105°C G: -20~+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