

Voltage Controlled Crystal Oscillator (压控振荡器) - KV70

Feature 特征

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



RoHS
Compliant
KOAN

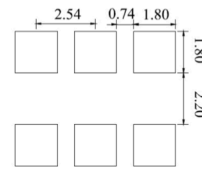
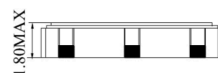
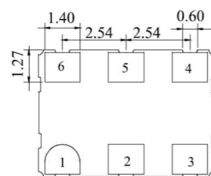
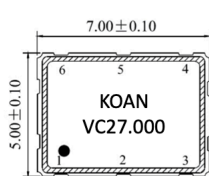
General Specifications 规格参考

| PARAMETER | 性能参数 | KV70 | | | |
|-----------------------------|--------|--------------------------------------|--------------------------|------------------------|-----------------------|
| Frequency Range | 频率范围 | 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 | ± 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 Ω 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 | o | o | o | o | o |
| C | -40~85 $^{\circ}$ C | | o | o | o | o |
| D | -20~105 $^{\circ}$ C | | | o | o | o |
| E | -40~105 $^{\circ}$ C | | | | o | o |
| F | -55~105 $^{\circ}$ C | | | | | o |
| G | -20~125 $^{\circ}$ 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



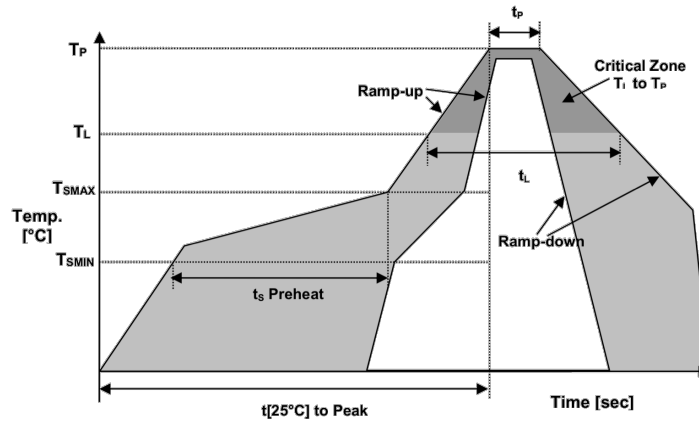
| Pin | Connection |
|-----|------------|
| #1 | Vcontrol |
| #2 | Tri-State |
| #3 | GND |
| #4 | Output |
| #5 | N.C. |
| #6 | VDD |

Part Number Guide 产品编号

KV70 - 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 '70':封装尺寸 SMD 7.0x5.0mm | (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 |