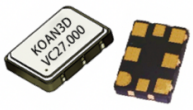
KOAN® *Product Information (产品介绍)*

# Voltage Controlled Crystal Oscillator (压控振荡器) - KV708C

RoHS Compliant KOAN




## Feature 特征

- Frequency pulling range from ±50~±200ppm 压控范围±50~±200ppm
- High frequency ultra-low jitter VCXO, including CMOS, LVPECL, LVDS, CML or HCSL output logics 高频低相位抖动

## 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

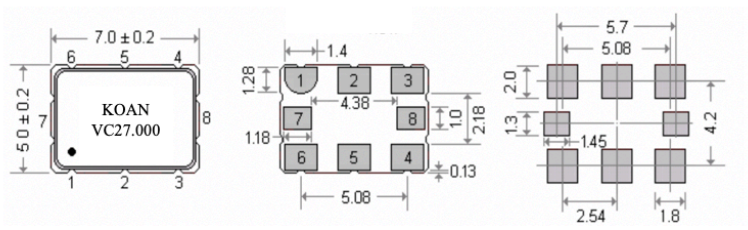
## General Specifications 规格参考

| PARAMETER | 性能参数 | KV708C | | |
|---|---|---|---|---|
| Frequency Range | 频率范围 | 15.0~700.0MHz | | |
| Supply Voltage | 供给电压 | +1.8V (±5%) | +2.5V (±10%) | +3.3V (±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 | HCSL | | |
| Output Load | 输出负载 | 50Ω to Ground | | |
| Frequency Tolerance | 调整频差 | ±20ppm | | |
| Current Consumption | 工作电流 | 80mA typ. 100mA max | | |
| Output Logic High "1"<br>Output Logic Low "0" | 输出电平 高<br>输出电平 低 | 0.66V~1.15V<br>0.0V~0.15V | | |
| Frequency Pulling Range | 压控范围 | ±50~±200ppm | | |
| Integrated Phase Jitter | 抖动 | 151fs RMS Phase Jitter typ. @1480MHz(12KHz~20MHz) | | |
| Input Impedance | 输入电阻 | 5MΩ typical | | |
| Rise & Fall Time | 上升下降时间 | 0.4ns max | | |
| Start-up Time | 起振时间 | 5ms typ.; 10ms max | | |
| Linearity | 非线性误差 | ±1% typ.; ±10% max | | |
| Duty Cycle | 占空比 | 45~55% | | |
| Modulation Bandwidth | 调制宽带 | 10KHz min. (-3dB) | | |
| Aging Per Year | 年老化率 | ±3ppm~±5ppm/year | | |
| Storage Temperature Range | 储存温度范围 | -55°C ~ +125°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°C | ○ | ○ | ○ | ○ | ○ |
| C | -40~85°C | | ○ | ○ | ○ | ○ |
| D | -20~105°C | | | ○ | ○ | ○ |
| E | -40~105°C | | | | ○ | ○ |
| F | -55~105°C | | | | | ○ |
| G | -20~125°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




| Pin | Connection |
|---|---|
| #1 | Control Voltage |
| #2 | Output Enable |
| #3 | Ground |
| #4 | Output |
| #5 | Complementary Output |
| #6 | Supply Voltage |
| #7 | Do not Connect |
| #8 | Do not Connect |

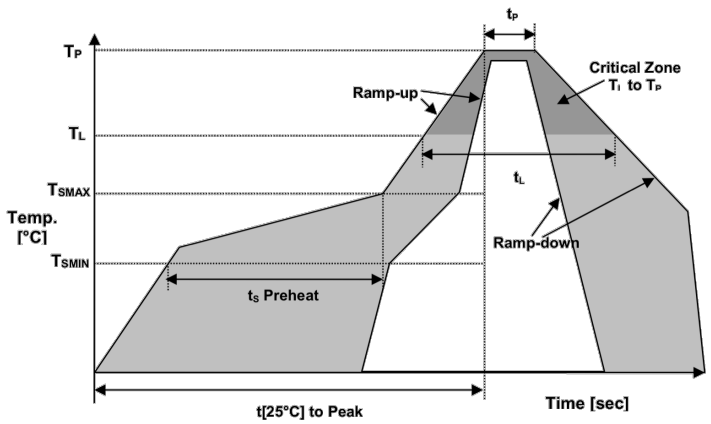
# KOAN® Product Information (产品介绍)

## Part Number Guide 产品编号

| KV708C | - | 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<br>**'708':**封装尺寸<br>SMD<br>7.0x5.0mm<br>8pad<br>**'C'** 输出波形<br>HCSL | | (In MHz) | | 50 = ±50ppm<br>100=±100ppm<br>150=±150ppm<br>200=±200ppm | | 18=1.8V<br>25=2.5V<br>33=3.3V | | B: -20~+70°C<br>C: -40~+85°C<br>D: -20~+105°C<br>E: -40~+105°C<br>F: -55~+105°C<br>G: -20~+125°C | | 10 = ±10ppm<br>20 = ±20ppm<br>30 = ±30ppm<br>50 = ±50ppm<br>100 = ±100ppm | | '**NS**':<br>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 |