

温补振荡器 Temperature Compensated Crystal Oscillator: K(V)T702 K(V)T702CS

Feature 特征

- CMOS and Clipped Sine wave output available 可选 CMOS 和削峰正弦波输出
- Wide frequency range from 6.4MHz to 52MHz 频率范围宽
- VCTCXO option allows frequency tuning via control voltage 支持通过控制电压进行频率微调
- Ideal for GPS, communication, industrial, and measurement systems 适用于 GPS/通信设备/工业控制/测量系统



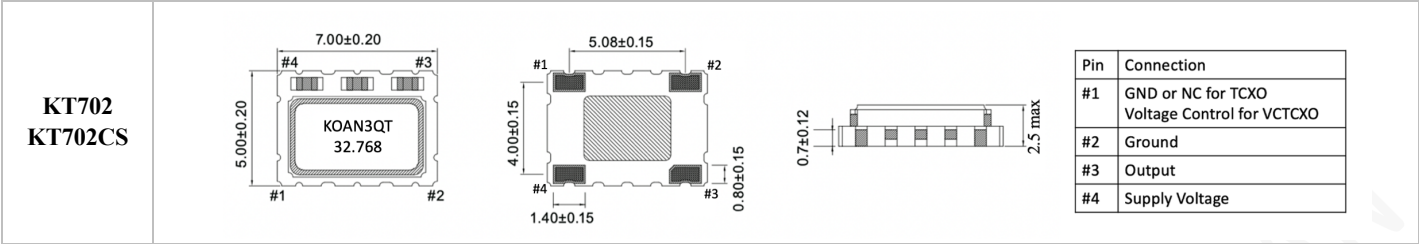
General Specifications 规格参考

PARAMETER	性能参数	K(V)T702			K(V)T702CS		
Supply Voltage	工作电压	+2.5V; +3.0V; +3.3V; +5.0V			+3.3V; +5.0V		
Frequency Range	频率范围	6.4~52.0MHz					
Standard Frequency	通用频率	10, 12.8, 16.384, 19.2, 20, 24.576, 25, 26, 30.72, 40, 50MHz					
Output Waveform	输出波形	CMOS			Clipped Sine		
Output Load	输出负载	15pF			10kΩ/10pF±10%		
Output Logic	输出电平	High: ≥0.9Vdd Low: ≤0.1Vdd			0.8Vp-p min.		
Initial Calibration Tolerance	调整频差	±1.0~±2.0ppm					
Current Consumption	工作电流	3.5mA max @ Clipped Sine 15mA max @ CMOS					
EFC Linearity	非线性误差	正向±10% max.					
Frequency Stability 频率稳定性 VS							
Operating Temperature Range	温度范围	见下表					
Frequency Stability	温度频差						
Load Change	负载变化	±0.3ppm (Load±5%)					
Voltage Change	电压变化	±0.3ppm (Vcc±5%)					
Aging	老化率	±1.0ppm/year max					
Reflow	回流焊	±1ppm max					
Control Voltage Range	控制电压范围	1.5±1.0V					
Frequency Tuning Range	频率调节范围	±5ppm min.					
Duty Cycle	占空比	45~55%					
Rise & Fall Time	上升下降时间	10ns max.					
Phase Noise @10MHz	相位噪声 Max (dBc/Hz)	-70	-115	-130	-145	-150	
		10Hz	100Hz	1kHz	10kHz	100kHz	
Input Impedance	输入电阻	50MΩ min.			-		
Modulation Bandwidth	调制宽带	3KHz min.					
Start-up Time	起振时间	2.0ms typ. 5.0ms max.					
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	±0.5	±1.0	±2.0	±2.5	±3.0	±5.0
A	-10~60°C	○	○	○	○	○	○
B	-20~70°C	○	○	○	○	○	○
C	-40~85°C		○	○	○	○	○

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

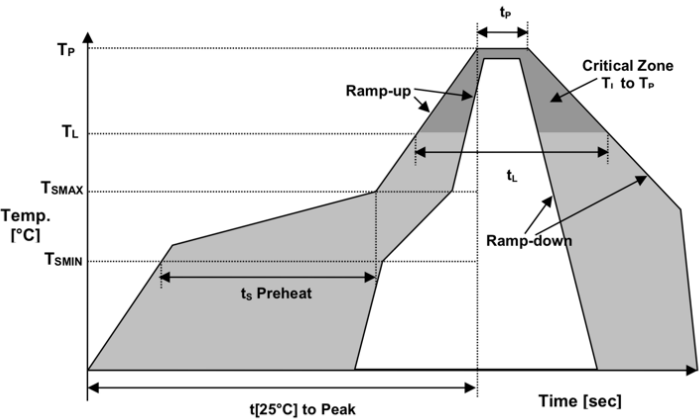
Outline Dimensions (Unit: mm) 外形尺寸



Part Number Guide 产品编号

<u>K(V)T702CS</u>	-	<u>20.000</u>	-	<u>33</u>	-	<u>C</u>	-	<u>03</u>	-	<u>NS</u>
↓		↓		↓		↓		↓		↓
型号	-	标称频率	-	工作电压	-	工作温度	-	温度频差	-	特殊要求
‘KT’:温补系列		(In MHz)						A5=±0.5ppm		‘NS’:特殊要求
KT: TCXO			25=2.5V		A: -10~+60°C		01 = ±1.0ppm			
KVT: VCTCXO			30=3.0V		B: -20~+70°C		02 = ±2.0ppm			
‘702’:封装尺寸			33=3.3V		C: -40~+85°C		025=±2.5ppm			
7.0x5.0mm			50=5.0V				03 = ±3.0ppm			
2 layers								05 = ±5.0ppm		

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