温补振荡器 Temperature Compensated Crystal Oscillator: K(V)T14 K(V)T14S K(V)T14CS

Feature 特征

- Available in CMOS, Clipped Sine, and True Sine Wave output 提供方波/正弦波/削峰正弦波输出类型
- Tight frequency stability ±1.0ppm over -40℃ to +85℃ 宽温范围频率稳定性低
- VCTCXO option allows frequency tuning via control voltage 支持通过控制电压进行频率微调
- DIP 14 through-hole package for industrial applications 插件封装适合工业级应用
- Ideal for precision timing in communications, instrumentation, RF systems 满足通信，仪器仪表，射频系统中的精密时钟需求

General Specifications 规格参考

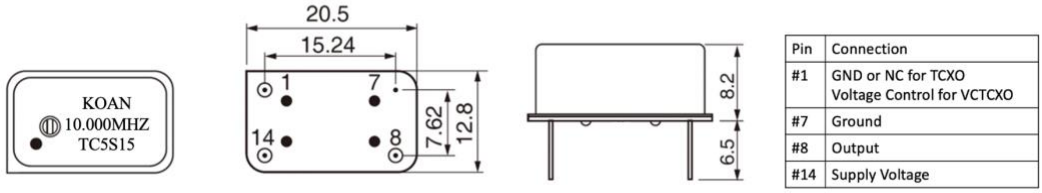
PARAMETER	性能参数	K(V)T14	K(V)T14S	K(V)T14CS
Supply Voltage	工作电压	+3.3V; +5.0V; ±12.0V		
Frequency Range	频率范围	6.0~60.0MHz	10~200MHz	6.0~60.0MHz
Standard Frequency	通用频率	10, 12.8, 16.384, 19.2, 20, 24.576, 25, 26, 30.72, 40, 50MHz		
Output Waveform	输出波形	CMOS	Sine	Clipped Sine
Output Load	输出负载	15pF	50Ω	10KΩ//10pF±10%
Output Logic	输出电平	High: ≥0.9Vdd Low: ≤0.1Vdd	0.8Vp-p min.	
Initial Calibration Tolerance	调整频差	±0.5~±2.0ppm		
Current Consumption	工作电流	40mA max	36mA max	40mA max
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	±0.2ppm (Load±5%)		
Voltage Change	电压变化	±0.2ppm (Vcc±5%)		
Aging	老化率	±1.0ppm/year max		
Frequency Tunning Method	频率调节方式	电压调节/机械微调/NC		
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% (f≤40MHz); 40~60% (f > 40MHz)	-	-
Rise & Fall Time	上升下降时间	10ns max.	-	-
Phase Noise @10MHz	相位噪声 Max (dBc/Hz)	-80 / 10Hz	-115 / 100Hz	-140 / 1kHz	-145 / 10kHz	-150 / 100kHz
Input Impedance	输入电阻	1.0MΩ min.	-	-
Modulation Bandwidth	调制宽带	3KHz min.		
Start-up Time	起振时间	5ms 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

KT14
KT14S
KT14CS

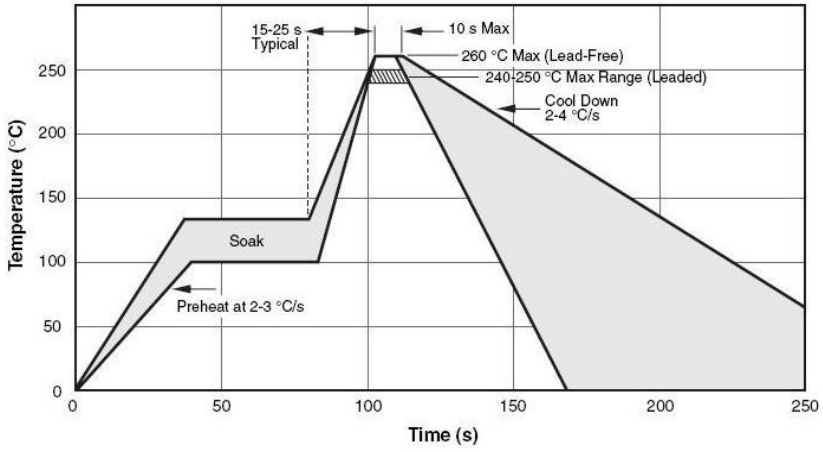


Pin	Connection
#1	GND or NC for TCXO Voltage Control for VCTCXO
#7	Ground
#8	Output
#14	Supply Voltage

Part Number Guide 产品编号

K(V)T14CS	-	20.000	-	33	-	C	-	03	-	NS
↓		↓		↓		↓		↓		↓
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 KT: TCXO KVT: VCTCXO **'14':**封装尺寸 DIP-14 **'CS'**: 输出波形 Clipped Sine		(In MHz)		33=3.3V 50=5.0V 12=12V		A: -10~+60°C B: -20~+70°C C: -40~+85°C		A5 = ±0.5ppm 01 = ±1.0ppm 02 = ±2.0ppm 025 = ±2.5ppm 03 = ±3.0ppm 05 = ±5.0ppm		**'NS'**:特殊要求

Wave Solder Profile 波峰焊



Average Ramp-up Rate	升温速度	~200°C/Second
Heating Rate during preheat	预热速度	1~2°C/second typ.; 4°C/second max
Final Preheat Temperature Ts	最终预热温度	~130°C
Peak Temperature Tp	最高温度	260°C
Time within +0°C/-5°C of actual temperature tp	实际温度时间	10 seconds
Ramp-Down Rate	降温速度	5°C/second max