

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 $\pm 0.5\text{ppm}$ over -40°C to $+85^{\circ}\text{C}$ 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	6mA max		36mA max	6mA 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	-20~+70℃		-40~+85℃	-55~+85℃	-55~+105℃
Frequency Stability	温度频差	±0.5~±2.5ppm		±0.5~±3.0ppm	±1.0~±5.0ppm	±5.0ppm
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 Tuning 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%				
Rise & Fall Time	上升下降时间	10ns max.				
Phase Noise @10MHz	相位噪声 Max (dBc/Hz)	-80	-115	-140	-145	-150
		10Hz	100Hz	1kHz	10kHz	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	2.0ms typ. 5.0ms max.				
Storage Temperature Range	储存温度范围	-55℃~+125℃				

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

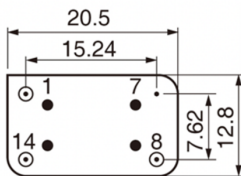
Outline Dimensions (Unit: mm) 外形尺寸

KT14

KT14S

KT14CS





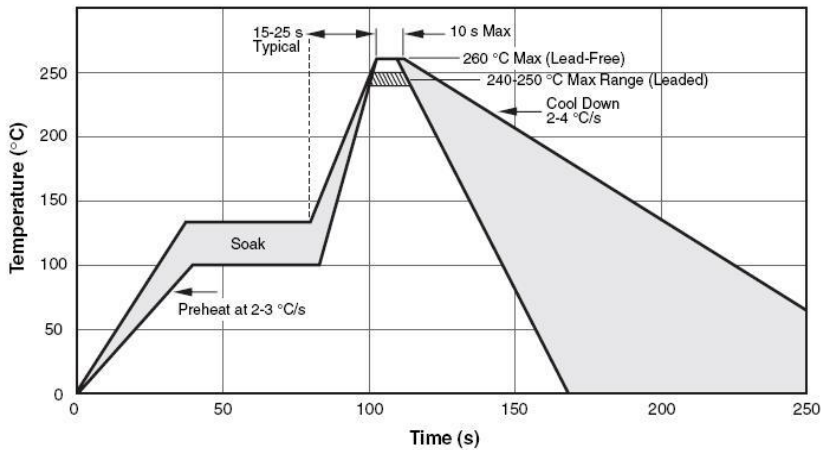


Pin	Connection
#1	GND or NC for TCXO Voltage Control for VCTCXO
#7	Ground
#8	Output
#14	Supply Voltage

Part Number Guide 产品编号

<u>K(V)T14CS</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								‘NS’:特殊要求		
KT: TCXO		33=3.3V		B: -20~+70°C		A5 = ±0.5ppm				
KVT: VCTCXO		(In MHz)		C: -40~+85°C		01 = ±1.0ppm				
‘14’:封装尺寸 DIP-14		50=5.0V		D: -55~+85°C		02 = ±2.0ppm				
		12=12V		E: -55~+105°C		03 = ±3.0ppm				
						05 = ±5.0ppm				

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

Revision 版本

版本 Rev.	修改页 Revise Page	修改内容 Revise Contents	日期 Date	修改人 Reviser
0	N/A	Initial issue	2020.09.27	JZ
1.1	1	Update specs	2021.11.17	JH
1.2	1	Part number guide	2022.06.13	JH