

温补振荡器 Temperature Compensated Crystal Oscillator: K(V)T706 K(V)T706D

■ Feature 特征

- SMD packages available with CMOS and LVDS output logic 贴片封装提供 CMOS, LVDS 输出逻辑选择
- Wide frequency range up to 250MHz (CMOS) and 1.5GHz (LVDS) 频率范围宽
- Tight frequency stability $\pm 1\text{ppm}$ max from -40 to 85°C 频率稳定性高
- VCTCXO option allows frequency tuning via control voltage 支持通过控制电压进行频率微调
- Ideal for networking, industrial control, and high speed digital systems 适用于网络通信, 工业控制, 高速数字系统



■ General Specifications 规格参考

PARAMETER	性能参数	K(V)T706			K(V)T706D		
Supply Voltage	工作电压	+2.5V; +3.3V					
Frequency Range	频率范围	10.0~250.0MHz			10.0~1500.0MHz		
Output Waveform	输出波形	CMOS			LVDS		
Output Load	输出负载	15pF			100Ω		
Output Logic	输出电平	High: ≥0.9Vdd Low: ≤0.1Vdd			High: 1.4V typ. 1.6V max Low: 1.1V typ. 0.9V min		
Initial Calibration Tolerance	调整频差	±2.0ppm max					
Current Consumption	工作电流	40mA max			57mA 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					
Reflow	回流焊	±1.0ppm max					
Duty Cycle	占空比	45~55%					
Rise & Fall Time	上升下降时间	3ns max.			0.4ns max.		
Phase Noise @125MHz	相位噪声 Max (dBc/Hz)	-50	-80	-100	-105	-110	
		10Hz	100Hz	1kHz	10kHz	100kHz	
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					
Control Voltage Function on Pad 1							
Control Voltage Center	中心控制电压范围	+1.5V±1.0V					
Frequency Tuning Range	频率调节范围	±8ppm min.					
Linearity	非线性误差	±1.0% typ.					
Input Impedance	输入电阻	770kΩ typ.					
Absolute Voltage	绝对电压	4V max					

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	$-10\sim 60^\circ\text{C}$	○	○	○	○	○	○
B	$-20\sim 70^\circ\text{C}$	○	○	○	○	○	○
C	$-40\sim 85^\circ\text{C}$		○	○	○	○	○

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

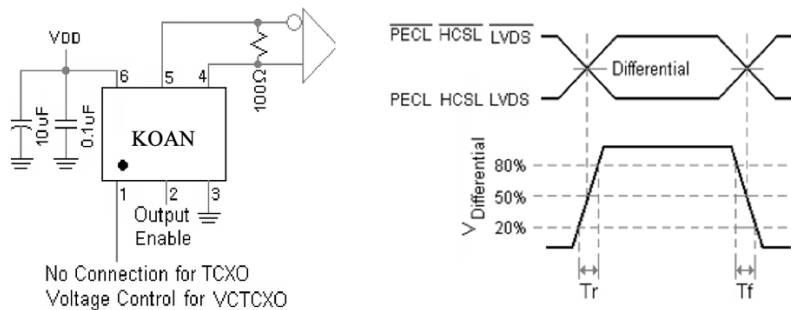
Outline Dimensions (Unit: mm) 外形尺寸

KT706

KT706D

Pin	Connection
#1	GND or NC for TCXO Voltage Control for VCTCXO
#2	Output Enable
#3	Ground
#4	CMOS: Output LVPECL/LVDS: Differential
#5	CMOS: No Connection LVPECL/LVDS: Complementary
#6	Supply Voltage

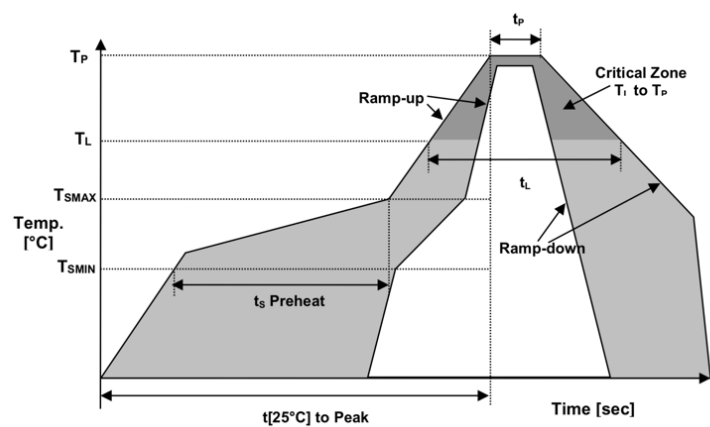
Test Circuit and Output Waveforms 测试电路图及输出波形



Part Number Guide 产品编号

<u>K(V)T706D</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 KT: TCXO KVT: VCTCXO ‘706’:封装尺寸 7.0x5.0mm 6-pad ‘D’: 输出波形 LVDS		(In MHz)		25=2.5V 33=3.3V		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

■ 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