

## 恒温振荡器 Oven Controlled Crystal Oscillator: KO5050T KO5050S

### ■ Feature 特征

- High Stability AT-cut or SC-cut Crystal, HCMOS or True Sine output Waveform; Voltage Control is standard 高稳定性(AT/SC 切晶片);有电压控制, 可选 HCMOS 或正弦波



### ■ General Specifications 规格参考

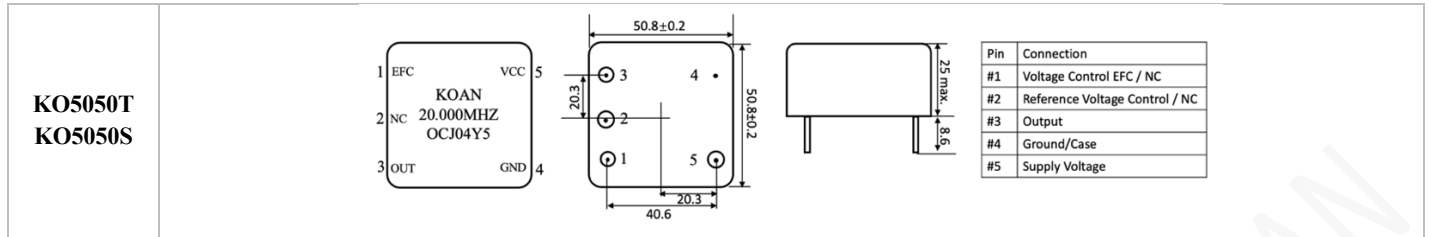
PARAMETER	性能参数	KO5050T		KO5050S		
Supply Voltage	工作电压	+5.0V±5%; +12.0V±5%				
Output Waveform	输出波形	HCMOS		True Sine		
Frequency Range	频率范围	5~20MHz		5~160MHz		
Standard Frequency	通用频率	5, 10, 100MHz				
Output Load	输出负载	15pF (50pF max)		50Ω		
Output Logic	输出电平	High: ≥0.9Vdd; Low: ≤0.1Vdd		5~9dBm		
Initial Calibration Tolerance	基准温度 初始精度	±100ppb max				
Voltage Control	压控范围	0~5V(Vcon=2.5V) 或 固定				
Frequency Adjustment	频率调整	±0.5~2.0ppm				
EFC Linearity	非线性误差	正向±10% max.				
Power Dissipation	功耗	2W max at steady-state@25°C; 6W max at turn-on				
<b>Frequency Stability 频率稳定性</b>						
Temperature	温度	见下表				
Load Change	负载变化	±1ppb max				
Voltage Change	电压变化	±1ppb max				
Warm-up Time	预热时间	5 minute max. within ±50ppb of its reference frequency.				
Aging	老化率	±0.5~±5ppb per day; ±20~±500ppb per year				
Harmonic	谐波	-		<-30dBc		
Spurious	杂散抑制	-		<-75dBc		
Duty Cycle	占空比	45~55%		-		
Rise & Fall Time	上升下降时间	7 ns max.		-		
Phase Noise	相位噪声(dBc/Hz)	-75 → -110	-90 → -130	-120 → -150	-140 → -160	-150 → -165
		1Hz	10Hz	100Hz	1KHz	>10KHz
Storage Temperature Range	储存温度范围	-55°C~+125°C				
Shock	冲击	2000 G's, 0.3ms 1/2sine				
Vibration	振动	10 to 2000 Hz/10G's				

### Frequency Stability 温度频差 V.S. Operating Temperature Range 温度范围

温度	系列	标准 Standard Series	高稳 High Stability	超优短稳 Ultra Low Short-term Stability Allan Deviation≤5x10 <sup>-12</sup> (1s)	低相噪 Low Phase Noise
		5~50MHz	5~40MHz	5/10MHz	10~160MHz
	A: -10~60°C	±3~±50ppb	±0.1~±0.5ppb	±1~±30ppb	±50~±100ppb
	B: -20~70°C	±5~±50ppb	±0.5~±1ppb	±3~±30ppb	±50~±200ppb
	C: -40~85°C	±30~±200ppb	±1~±10ppb	±20~±30ppb	±100~±500ppb

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

<b>KO5050T</b>	-	<b>20.000</b>	-	<b>50</b>	-	<b>C</b>	-	<b>A1</b>	-	<b>NS</b>
↓		↓		↓		↓		↓		↓
型号	-	标称频率	-	工作电压	-	工作温度	-	温度频差	-	特殊要求

‘KO’:温补系列  
 ‘5050’:封装尺寸  
 50.8x50.8mm/DIP  
 ‘T’:输出波形 HCMOS

(In MHz)

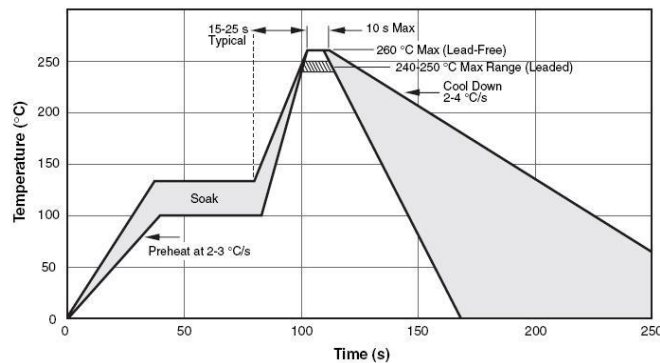
50=5.0V  
 12=12.0V

A: -10~+60°C  
 B: -20~+70°C  
 C: -40~+85°C

A1 = ±0.1ppm = ±100ppb  
 A3 = ±0.3ppm = ±300ppb  
 B1 = ±0.01ppm = ±10ppb  
 B2 = ±0.02ppm = ±20ppb  
 B3 = ±0.03ppm = ±30ppb  
 C3 = ±0.003ppm = ±3ppb  
 C5 = ±0.005ppm = ±5ppb

‘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

## 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	2021.01.22	JH