

## Oven Controlled Clock Oscillator (恒温振荡器) - KO2013T

### Feature 特征

- High Stability; AT-cut Crystal 高稳定 AT 切晶片
- Voltage Control (Electronic Frequency Tuning) is standard 有电压控制

### Applications 应用

- Mobile base station defense (mobile target display radar), navigation, frequency counters, spectrum and network analysis instruments (frequency standards) 移动通信基站国防(移动目标显示雷达),导航, 频率计数器, 频谱和网络分析仪器(频率标准)



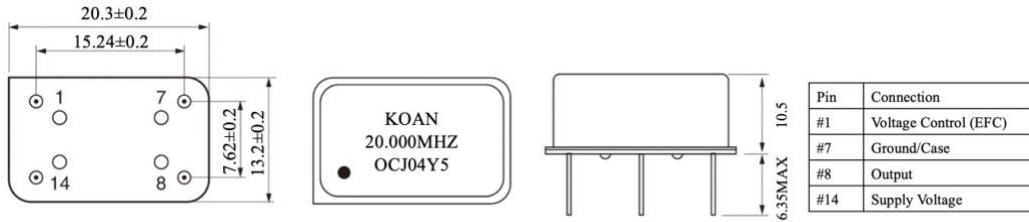
### General Specifications 规格参考

PARAMETER	性能参数	KO2013T	
Frequency Range	频率范围	5.0~40.0MHz	
Supply Voltage	工作电压	+3.3V±5%	+5.0V±5%
Control Voltage Center	中心控制电压	+1.65V	+2.5V
Initial Calibration Tolerance	调整频差	±0.5ppm max	
Type of Crystal Cut	晶体切法	SC-cut or IT-cut	
Output Logic	输出波形	HCMOS	
Output Load	输出负载	15pF	
<b>Frequency Stability 频率温度稳定度 VS</b>			
Temperature	温度	见下表	
Voltage Change	电压变化	±50ppb max (supply voltage ±5% variation)	
Warm-up Time	预热时间	10 minutes max	
Aging	老化率	±3ppm max over 10 years	
Load Change	负载变化	±10ppb max	
Frequency Deviation Range	电压调整	±5ppm min	
Input Impedance	输入电阻	50KΩ min.	
EFC Linearity	非线性误差	±10% max.	
Power Dissipation	功耗	0.8W max at steady-state; 600mA max at turn-on	
Output Logic High	输出电平 高	+2.4V min.	
Output Logic Low	输出电平 低	+0.5V max.	
Phase noise	相位噪声	-108dBc at 10Hz	
Duty Cycle	占空比	45~55%	
Rise & Fall Time	上升下降时间	7 ns max.	
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 VS Operating Temperature Range 温度范围			
Temp. Code	Temp. \ppb	±50ppb (B5)	±100ppb (A1)
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

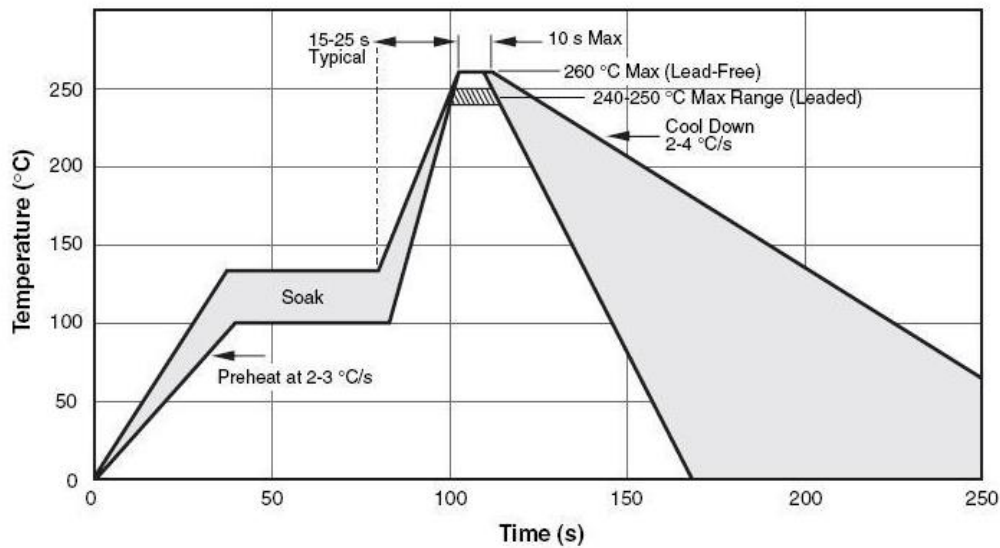
## Outline Dimensions (Unit: mm) 外形尺寸



## Part Number Guide 产品编号

型号	标称频率	工作电压	工作温度	温度频差	特殊要求
<b>KO2013T</b>	<b>20.000</b>	<b>33</b>	<b>A</b>	<b>B5</b>	<b>NS</b>
'KO': 产品系列 '2013': 封装尺寸 20.3x13.2mm 'T': 输出波形 HCMOS	(In MHz)	33=3.3V 50=5.0V	A: -10~+60°C B: -20~+70°C C: -40~+85°C	B5 = ±50ppb A1 = ±0.1ppm	'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 typical; 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