

Oven Controlled Crystal Oscillator (恒温振荡器) - KO2013T/KO2013S

Feature 特征

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



RoHS
Compliant
KOAN

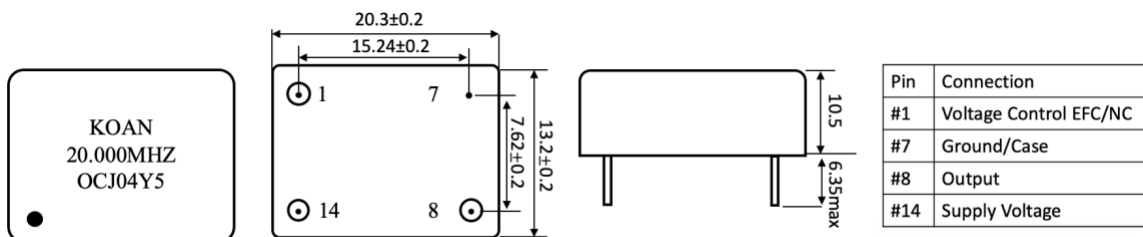
Applications 应用

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		KO2013S		
Supply Voltage	工作电压	+3.3V±5%; +5.0V±5%; +12.0V±5%				
Output Waveform	输出波形	HCMOS		True Sine		
Frequency Range	频率范围	5~50MHz		5~160MHz		
Standard Frequency	通用频率	5, 10, 12.5, 20, 38.88, 80, 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	±50ppb~±500ppb				
Voltage Control	压控范围	0~3.3V(Vcon=1.65V); 0~5V(Vcon=2.5V) 或 固定				
Frequency Adjustment	频率调整	±2.0~5.0ppm(AT-cut); ±0.3~1.0ppm(SC-cut)				
EFC Linearity	非线性误差	正向±10% max.				
Power Dissipation	功耗	1.5W max at steady-state@25°C; 3.0W max at turn-on				
Frequency Stability 频率稳定性						
Operating Temperature Range	温度范围	-10~+60°C	-20~+70°C	-40~+85°C	-55~+105°C	
Frequency Stability	温度频差	±50~±200ppb	±100~±300ppb	±200~±500ppb	±300~±500ppb	
Load Change	负载变化	±5~±20ppb				
Voltage Change	电压变化	±5~±20ppb				
Warm-up Time	预热时间	5 minute max. within ±50ppb of its reference frequency.				
Aging	老化率	±5~±10ppb per day; ±200~±1000ppb per year				
Harmonic	谐波	-		<-30dBc		
Spurious	杂散抑制	-		<-70dBc		
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)	-60 → -90	-80 → -110	-110 → -130	-120 → -140	-130 → -150
		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 ½sine				
Vibration	振动	10 to 2000 Hz/10G's				

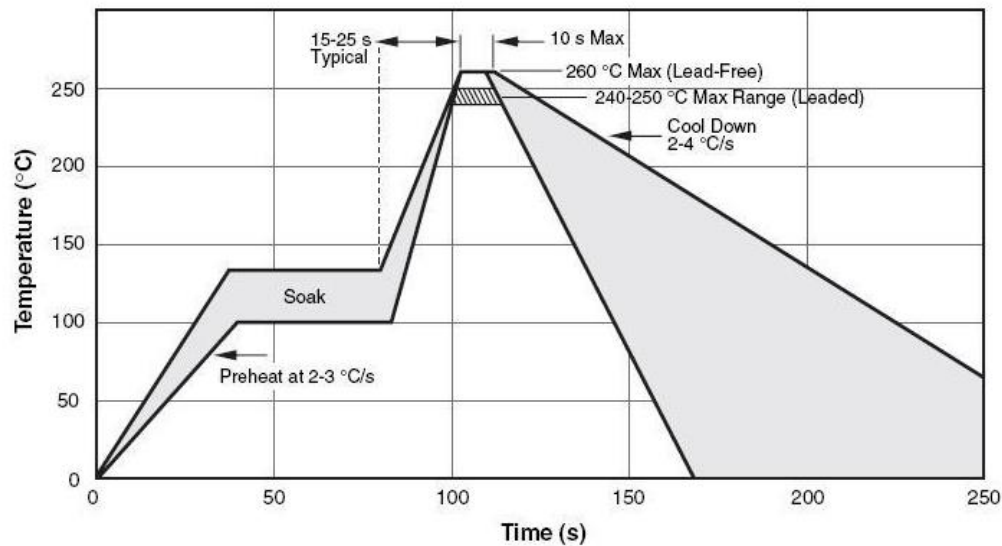
Outline Dimensions (Unit: mm) 外形尺寸



Part Number Guide 产品编号

<u>KO</u>	<u>2013</u>	<u>T</u>	-	<u>20.000</u>	-	<u>50</u>	-	<u>A</u>	-	<u>C3</u>	-	<u>NS</u>
↓	↓	↓		↓		↓		↓		↓		↓
系列	封装	输出波形	-	标称频率	-	工作电压	-	工作温度	-	温度频差	-	特殊要求
KOAN OCXO	5050: 50.8x50.8mm/DIP 3627: 36.2x27.7mm/DIP 2525: 25.4x25.4mm/DIP 2020: 20.3x20.3mm/DIP 2013: 20.3x13.2mm/DIP	T= HCMOS S=True Sine		(In MHz)		33=3.3V 50=5.0V 12=12.0V		A: -10~+60°C B: -20~+70°C C: -40~+85°C E: -55~105°C		C3 = ±3ppb C5 = ±5ppb B1 = ±10ppb ...		'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

Revision 版本

版本 Rev.	修改页 Revise Page	修改内容 Revise Contents	日期 Date	修改人 Reviser
1.0	NA	-	2021.01.22	JH