

## Oven Controlled Crystal Oscillator (恒温振荡器) - KO0907T

### Feature 特征

Ultra Small Profile 超小尺寸

High Stability 高稳定性

Voltage Control is standard 有电压控制



RoHS  
Compliant  
KOAN

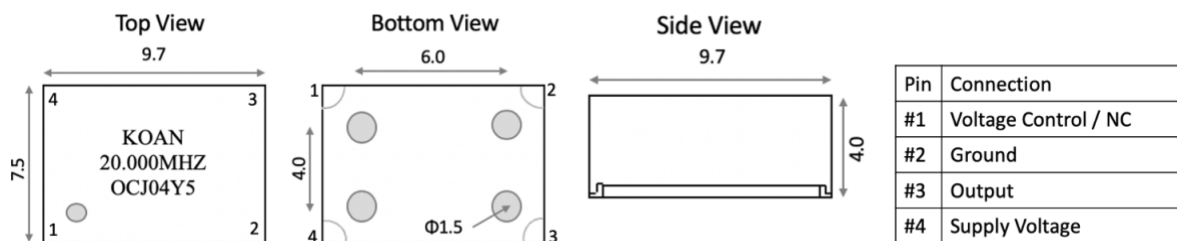
### Applications 应用

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              | KO0907T   |      |       |      |        |
|-------------------------------|-------------------|---|------|-------|------|--------|
| Supply Voltage                | 工作电压              | +3.3V±5%  |      |       |      |        |
| Output Waveform               | 输出波形              | HCMOS   |      |       |      |        |
| Frequency Range               | 频率范围              | 5~40MHz   |      |       |      |        |
| Standard Frequency            | 通用频率              | 10, 12.8, 13, 19.2, 20, 25.6, 30.72, 38.88MHz           |      |       |      |        |
| Output Load                   | 输出负载              | 15pF (50pF max)   |      |       |      |        |
| Output Logic                  | 输出电平              | High: ≥0.9Vdd<br>Low: ≤0.1Vdd                           |      |       |      |        |
| Initial Calibration Tolerance | 基准温度初始精度          | ±500ppb max   |      |       |      |        |
| Voltage Control               | 压控范围              | Vcon = +1.5 ± 1.3V 或 固定                                 |      |       |      |        |
| Frequency Adjustment          | 频率调整              | ±5.0ppm min   |      |       |      |        |
| EFC Linearity                 | 非线性误差             | 正向±10% max.   |      |       |      |        |
| Power Dissipation             | 功耗                | 0.6W max at steady-state@25°C; 1.5W max at turn-on      |      |       |      |        |
| Frequency Stability 频率稳定性     |                   |   |      |       |      |        |
| Operating Temperature Range   | 温度范围              | -40~+85°C   |      |       |      |        |
| Frequency Stability           | 温度频差              | ±10~±50ppb  |      |       |      |        |
| Load Change                   | 负载变化              | ±10ppb max  |      |       |      |        |
| Voltage Change                | 电压变化              | ±10ppb max  |      |       |      |        |
| Warm-up Time                  | 预热时间              | 3 minute max. within ±50ppb of its reference frequency. |      |       |      |        |
| Aging                         | 老化率               | ±5ppb per day; ±300ppb per year                         |      |       |      |        |
| Duty Cycle                    | 占空比               | 45~55%  |      |       |      |        |
| Rise & Fall Time              | 上升下降时间            | 7 ns max.   |      |       |      |        |
| Phase Noise @10MHz            | 相位噪声 Max (dBc/Hz) | -70   | -100 | -130  | -145 | -155   |
|                               |                   | 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                                     |      |       |      |        |

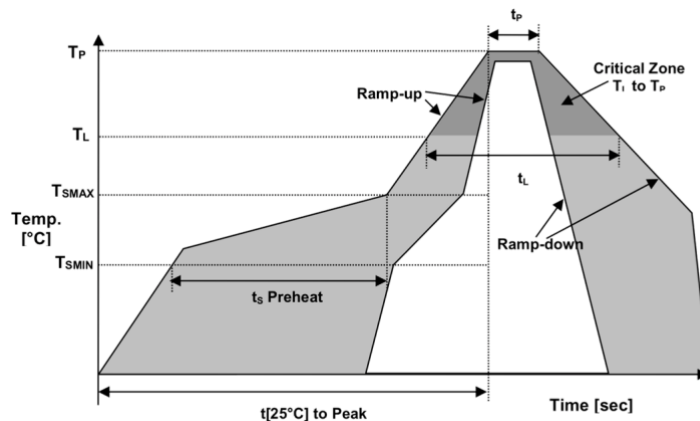
### Outline Dimensions (Unit: mm) 外形尺寸



## Part Number Guide 产品编号

| <u>KO</u>    | <u>0907</u>                                 | <u>T</u> | - | <u>20.000</u> | - | <u>33</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<br>OCXO | 0907: 9.7x7.5mm/SMD<br>1409: 14.3x9.3mm/SMD | T= HCMOS |   | (In MHz)      |   | 33=3.3V   |   | A: -10~+60°C<br>B: -20~+70°C<br>C: -40~+85°C |   | A5 = ±500ppb<br>... |   | '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 $t[25^\circ\text{C}]$ to peak temperature | 25度到最高温度时间 | $t[25^\circ\text{C}]$ to peak | 480 sec     |
| Time   | 时间         | $t_L$                         | 60~150 sec  |

## Revision 版本

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