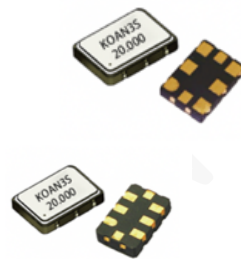


## 时钟振荡器 Clock Oscillator: KS508T KS708T

## ■ Feature 特征

- Programmable clock oscillators (CMOS, PECL, LVDS, CML, HCSL output logic) 可编程输出逻辑
- Typical phase jitter as low as 150fs RMS 相位噪声低, 适用于噪声敏感应用
- Embedded bypass capacitor for improved noise performance and easier board design 内嵌旁路电容, 提升抗干扰性能, 简化电路设计
- Short production lead time to support fast time-to-market 快速交货
- Ideal for high-speed communications, data centers, networking, industrial and A/V system 适用于高速通信, 数据中心, 网络设备, 工业控制, 音响视频系统等



## ■ General Specifications 规格参考

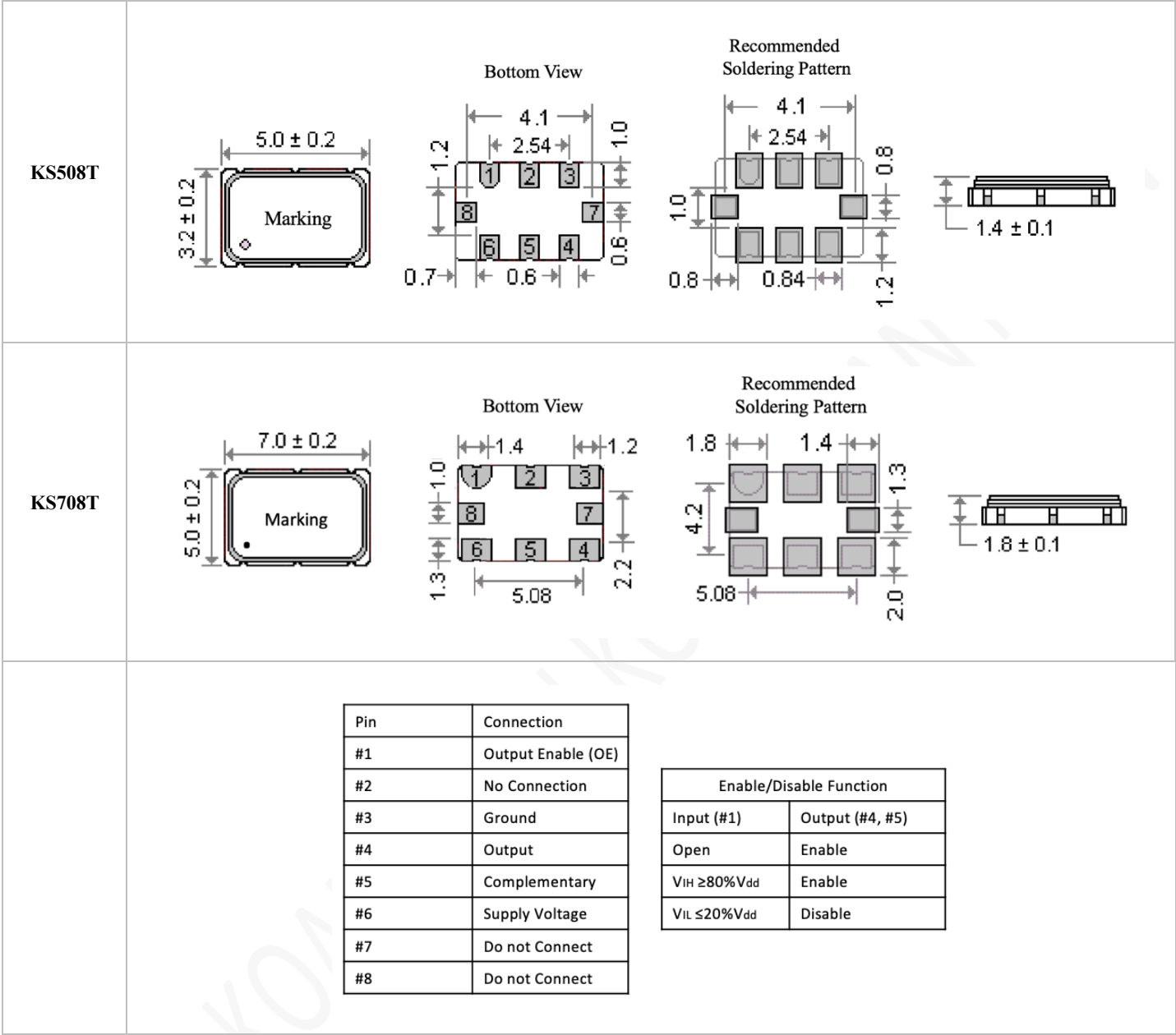
| PARAMETER                   | 性能参数    | KS508T                                | KS708T |
|-----------------------------|---------|---------------------------------------|--------|
| Frequency Range             | 频率范围    | 150.0MHz~250.0MHz                     |        |
| Supply Voltage              | 供给电压    | 1.8V/2.5V/3.3V (±10%)                 |        |
| Output Logic                | 输出波形    | CMOS                                  |        |
| Frequency Tolerance         | 调整频差    | ±5ppm ~ ±30ppm                        |        |
| Frequency Stability         | 温度频差    | 见下表                                   |        |
| Operating Temperature Range | 温度范围    | 见下表                                   |        |
| Current Consumption         | 工作电流    | 90mA max.                             |        |
| Output Load                 | 输出负载    | 15pF                                  |        |
| Start-up Time               | 起振时间    | 5ms typ.; 10ms max                    |        |
| Duty Cycle                  | 占空比     | 45~55%                                |        |
| Rise & Fall Time            | 上升下降时间  | 5ns max                               |        |
| Output Logic High "1"       | 输出电平 高  | 0.9V <sub>dd</sub> min                |        |
| Output Logic Low "0"        | 输出电平 低  | 0.1V <sub>dd</sub> max                |        |
| Output Enable/Disable Time  | 启动/禁用时间 | Enable: 2.5ms max; Disable: 10μs max. |        |
| RMS Phase Jitter            | 抖动      | 150 fs typ. (12KHz~20MHz)             |        |
| Storage Temperature Range   | 储存温度范围  | -55°C ~ +125°C                        |        |
| Aging Per Year              | 老化率     | ±3ppm~±5ppm/year                      |        |

Frequency Stability 温度频差 VS Operating Temperature Range 温度范围

| Temp. Code | Temp.\ppm | ±10 | ±20 | ±30 | ±50 | ±100 |
|------------|-----------|-----|-----|-----|-----|------|
| B          | -20~70°C  | ○   | ○   | ○   | ○   | ○    |
| C          | -40~85°C  |     | ○   | ○   | ○   | ○    |
| D          | -55~85°C  |     |     |     | ○   | ○    |
| E          | -55~105°C |     |     |     | ○   | ○    |
| F          | -55~125°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

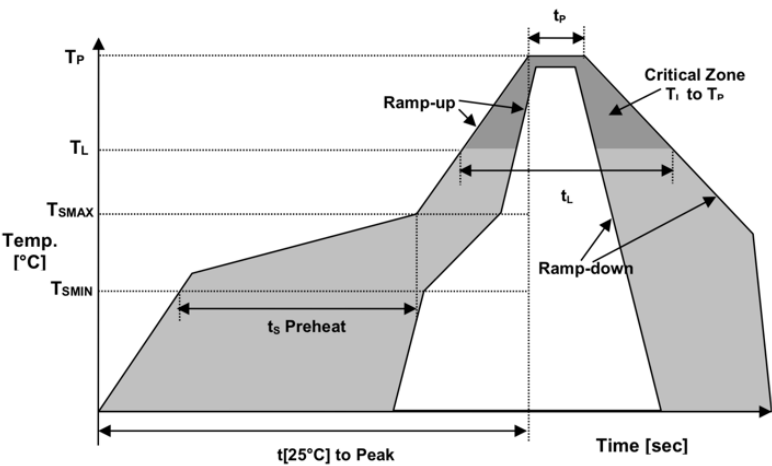


■ Part Number Guide 产品编号

|        |   |         |   |      |   |      |   |      |   |      |
|--------|---|---------|---|------|---|------|---|------|---|------|
| KS508T | - | 156.250 | - | 33   | - | C    | - | 30   | - | NS   |
| ↓      |   | ↓       |   | ↓    |   | ↓    |   | ↓    |   | ↓    |
| 型号     | - | 标称频率    | - | 工作电压 | - | 工作温度 | - | 温度频差 | - | 特殊要求 |

|                     |          |               |               |           |
|---------------------|----------|---------------|---------------|-----------|
| 'KS': 非差分系列         |          | B: -20~+70°C  | 10 = ±10ppm   | 'NS':特殊要求 |
| '508':封装尺寸          |          | C: -40~+85°C  | 20 = ±20ppm   |           |
| SMD 5.0x3.2mm 8 pad | (In MHz) | D: -55~+85°C  | 30 = ±30ppm   |           |
| 'T': 输出波形           |          | E: -55~+105°C | 50 = ±50ppm   |           |
| CMOS                |          | F: -55~+125°C | 100 = ±100ppm |           |
|                     | 18=1.8V  |               |               |           |
|                     | 25=2.5V  |               |               |           |
|                     | 33=3.3V  |               |               |           |

■ 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 $t[25^{\circ}C]$ to peak temperature | 25度到最高温度时间 | $t[25^{\circ}C]$ 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 |
|------------|--------------------|-------------------------|------------|----------------|
| 0          | N/A                | Initial issue           | 2021.12.27 | JZ             |
| 1.1        | 2                  | Pin description         | 2022.06.20 | JZ             |
| 1.2        | 1                  | Specs update            | 2025.12.04 | JZ             |