

## Clock Oscillator (时钟振荡器) - KD506D

### Feature 特征

- Programmable (PECL, LVDS, HCSL) differential clock oscillator  
High frequency up to 2.1GHz 超高频可编程差分输出
- Ship within days 交期短



RoHS  
Compliant  
KOAN

### Applications 应用

- Mobile communications, radar navigation, digital products, HD monitoring, precision instruments  
移动通信, 雷达导航, 数码产品, 高清监控, 精密仪器等

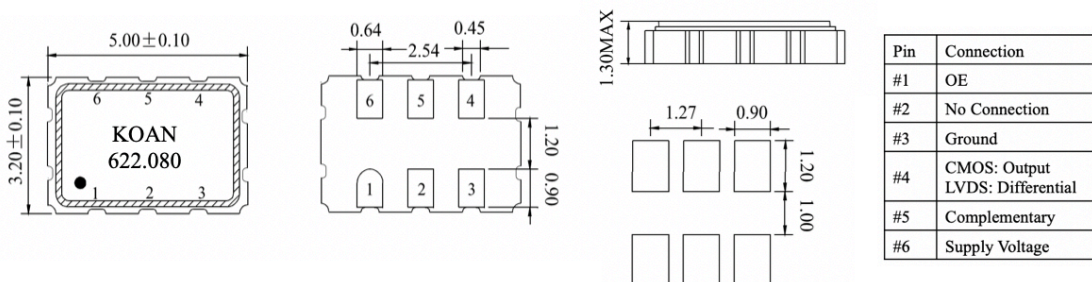
### General Specifications 规格参考

| PARAMETER                 | 性能参数   | KD506D                               |                       |
|---------------------------|--------|--------------------------------------|-----------------------|
| Frequency Range           | 频率范围   | 10.0MHz~200.0MHz                     | 200.0MHz~2.1GHz       |
| Supply Voltage            | 供给电压   | +2.5V/3.3V (±10%)                    |                       |
| Output Logic              | 输出波形   | LVDS                                 |                       |
| Output Load               | 输出负载   | 100Ω between output and comp. output |                       |
| Frequency Tolerance       | 调整频差   | ±5ppm ~ ±30ppm                       |                       |
| Current Consumption       | 工作电流   | 27mA max                             | 40mA max              |
| Output Logic High "1"     | 输出电平 高 | 1.4V typ. 1.6V max                   |                       |
| Output Logic Low "0"      | 输出电平 低 | 1.1V typ. 0.9V min                   |                       |
| Output Voltage Swing      | 输出电压波动 | 250mV~450mV                          |                       |
| RMS Jitter (12KHz~20MHz)  | 抖动     | 0.2pS typ. 0.5pS max.                | 1.0pS typ. 1.3pS max. |
| Rise & Fall Time          | 上升下降时间 | 0.4ns max                            | 0.5ns max             |
| Start-up Time             | 起振时间   | 10ms max                             |                       |
| Duty Cycle                | 占空比    | 45~55%                               |                       |
| Aging Per Year            | 年老化率   | ±3ppm~±5ppm/year                     |                       |
| Storage Temperature Range | 储存温度范围 | -55°C ~ +125°C                       |                       |

| 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                                                            | -20~105°C |     |     | ○   | ○   | ○    |
| E                                                            | -40~105°C |     |     |     | ○   | ○    |
| F                                                            | -55~105°C |     |     |     |     | ○    |
| G                                                            | -20~125°C |     |     |     |     | ○    |

NOTE: Please consult for other specifications 若有其它规格需求请告知

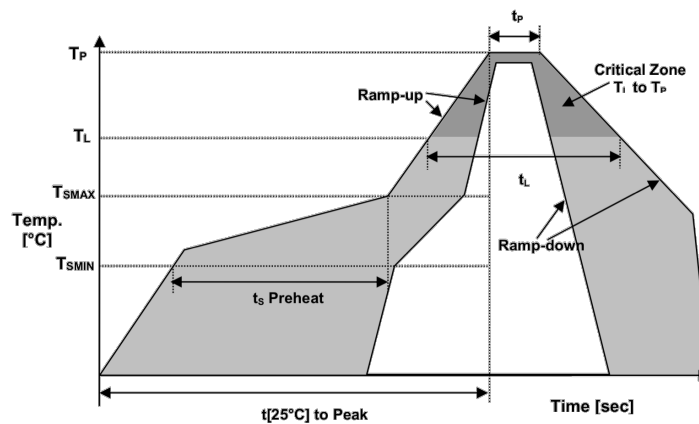
### Outline Dimensions (Unit: mm) 外形尺寸



## Part Number Guide 产品编号

| <u>KD506D</u>                                                                         | - | <u>622.080</u> | - | <u>33</u>          | - | <u>C</u>                                                                                         | - | <u>30</u>                                                                 | - | <u>NS</u> |
|---------------------------------------------------------------------------------------|---|----------------|---|--------------------|---|--------------------------------------------------------------------------------------------------|---|---------------------------------------------------------------------------|---|-----------|
| ↓                                                                                     |   | ↓              |   | ↓                  |   | ↓                                                                                                |   | ↓                                                                         |   | ↓         |
| 型号                                                                                    | - | 标称频率           | - | 工作电压               | - | 工作温度                                                                                             | - | 温度频差                                                                      | - | 特殊要求      |
| 'KD':产品系列<br>KOAN-DIFF 差分<br>'506':封装尺寸<br>SMD<br>5.0x3.2mm 6 pad<br>'D':输出波形<br>LVDS |   | (In MHz)       |   | 25=2.5V<br>33=3.3V |   | B: -20~+70°C<br>C: -40~+85°C<br>D: -20~+105°C<br>E: -40~+105°C<br>F: -55~+105°C<br>G: -20~+125°C |   | 10 = ±10ppm<br>20 = ±20ppm<br>30 = ±30ppm<br>50 = ±50ppm<br>100 = ±100ppm |   | '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 $t[25°C]$ to peak temperature  | 25度到最高温度时间 | $t[25°C]$ to peak | 480 sec     |
| Time                                | 时间         | $t_L$             | 60~150 sec  |