

时钟振荡器 Clock Oscillator: KD256C KD326C KD506C KD706C

Feature 特征

- Miniature 2.5x2.0mm package for space-constrained designs 小型化适合空间受限的设计
- HCSL differential output, ideals for high-speed serial interfaces HCSL 差分输出适用于高速串行接口应用
- Ultra-low phase jitter 0.2ps RMS typical, ensuring excellent timing stability 相位抖动极低, 时钟稳定性优秀
- Wide frequency range up to 200MHz, optimized for clocking in computing and networking 高达 200MHz 的频率, 用于在计算机和网络设备的时钟



General Specifications 规格参考

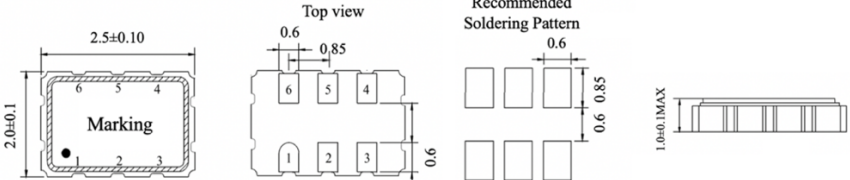
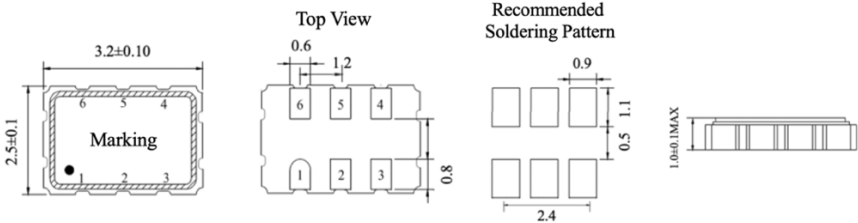
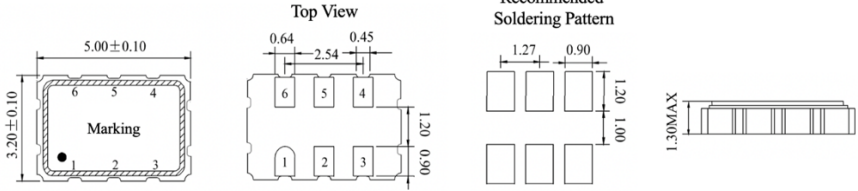
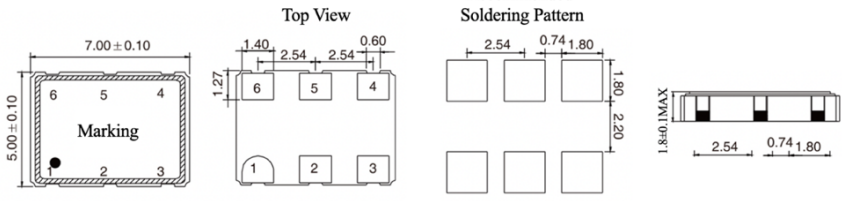
PARAMETER	性能参数	KD256C KD326C KD506C KD706C	KD326C KD506C KD706C
Package size/pad	尺寸/引脚数	2.5x2.0mm/6	-
		3.2x2.5mm/6	3.2x2.5mm/6
		5.0x3.2mm/6	5.0x3.2mm/6
		7.0x5.0mm/6	7.0x5.0mm/6
Frequency Range	频率范围	13.5MHz ~ 200MHz	100MHz~250MHz
Supply Voltage	供给电压	+1.8V/2.5V/3.3V(±10%)	
Output Logic	输出波形	HCSL	
Frequency Tolerance	调整频差	±30ppm max	
Frequency Stability	温度频差	见下表	
Operating Temperature Range	温度范围	见下表	
Current Consumption (15pF load)	工作电流	30mA max	32mA typ.; 40mA max
Output Load	输出负载	50Ω to ground on each output	
Start-up Time	起振时间	10ms max	
Duty Cycle	占空比	45~55%	
Rise & Fall Time	上升下降时间	0.8ns max	
Output Enable/Disable Time	启动/禁用时间	Enable: 10ms max Disable: 0.2μs max	
Output Logic High "1" Output Logic Low "0"	输出电平 高 输出电平 低	高=400mV min, 750mV typ. 低=-150mV~150mV @1.8V 高=550mV~850mV 低=-150mV~150mV @2.5V 高=550mV~850mV 低=-150mV~150mV @3.3V	
Output Voltage Swing	输出电压波动	400mV min. @1.8V; 500mV min. @2.5V; 600mV min. @3.3V	
RMS Phase Jitter [12KHz~20MHz]	抖动	0.2ps typ.; 0.5ps max.	50fs typ.; 300fs max.
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

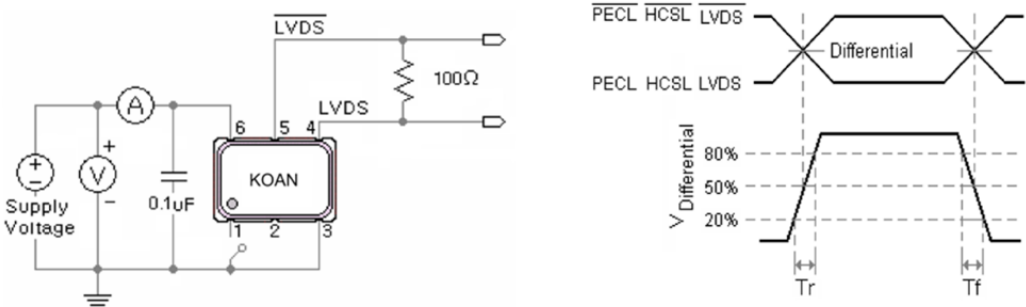
Temp. Code	Temp.\ppm	±10	±20	±30	±50	±100
B	-20~70°C	○	○	○	○	○
C	-40~85°C		○	○	○	○
D	-55~85°C				○	○
E	-55~105°C				○	○
F	-55~125°C					○

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

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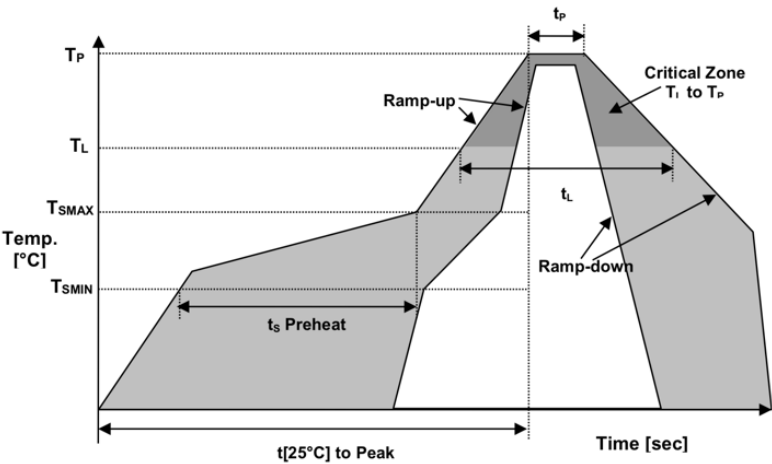
■ Test Circuit and Output Waveforms 测试电路图及输出波形



Part Number Guide 产品编号

<u>KD326C</u>	-	<u>20.000</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’: 差分晶振 ‘326’:封装尺寸 SMD 3.2x2.5mm 6 pad ‘C’: 输出波形 HCSL					B: -20~+70°C C: -40~+85°C D: -55~+85°C E: -55~+105°C F: -55~+125°C					10 = ±10ppm 20 = ±20ppm 30 = ±30ppm 50 = ±50ppm 100 = ±100ppm
(In MHz)					‘NS’:特殊要求					
18=1.8V 25=2.5V 33=3.3V										

Reflow Profile 回流焊



Temperature Min Preheat	最低预热温度	Tsmin	150°C
Temperature Max preheat	最高预热温度	Tsmax	200°C
Time (Tsmin to Tsmax)	时间差	Ts	60~120 sec
Temperature	温度	TL	217°C
Peak Temperature	最高温	TP	260 °C
Ramp-up Rate	升温速度	Rup	3°C/sec max
Ramp-down Rate	降温速度	Rdown	6°C/sec max
Time within 5°C of Peak Temperature	最高温度停留时间	tp	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	tL	60~150 sec

Revision 版本

版本 Rev.	修改页 Revise Page	修改内容 Revise Contents	日期 Date	修改人 Reviser
0	N/A	Initial issue	2021.12.27	JZ
1.0	2	Pin description	2022.06.20	JZ
1.1	1	Specs update	2025.12.04	JZ