时钟振荡器 Clock Oscillator: KD508C KD708C

Feature 特征

- Programmable differential output logic (CMOS, PECL, LVDS, CL, HCSL) 可编程差分输出逻辑
- Wide frequency range up to 700MHz, ideal for high-speed digital systems 高达 700MHz 的高频输出，适用于高速数字系统和高速串行接口
- Ultra-low phase jitter typical 150fs RMS, ensuring high timing precision 超低相位抖动
- 8-pin layout ensure power and signal integrity at higher frequencies 8 引脚设计保证电源和信号完整性

General Specifications 规格参考

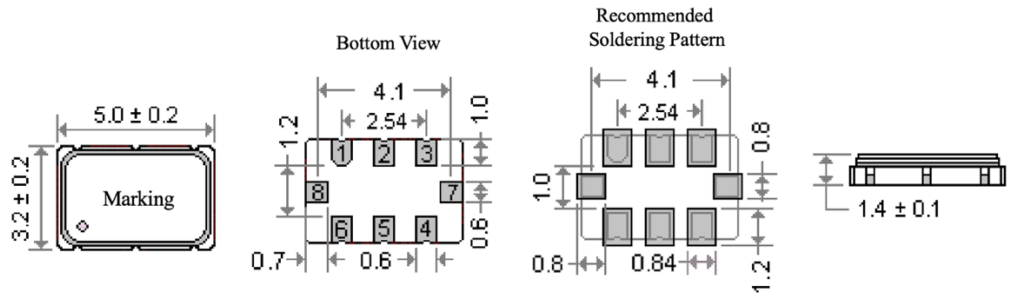
PARAMETER	性能参数	KD508C KD708C
Frequency Range	频率范围	150MHz ~ 700MHz
Supply Voltage	供给电压	+1.8V/2.5V/3.3V (±10%)
Output Logic	输出波形	HCSL
Frequency Tolerance	调整频差	±30ppm max
Frequency Stability	温度频差	见下表
Operating Temperature Range	温度范围	见下表
Current Consumption (15pF load)	工作电流	94mA typ. 115mA max.
Output Load	输出负载	50Ω to ground on each output
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	0.8ns max
Output Enable/Disable Time	启动/禁用时间	Enable: 2.5ms max Disable: 10μs max
Output Logic High “1” Output Logic Low “0”	输出电平 高 输出电平 低	0.66V~1.15V 0.0V~0.15V
Output Voltage Swing	输出电压波动	620~780mV
RMS Phase Jitter	抖动	150 fs typ. 300fs max. [12KHz~20MHz]
Storage Temperature Range	储存温度范围	-55°C ~ +125°C
Aging Per Year	年老化率	±3ppm ~ ±5ppm/year

Frequency Stability 温度频差 VS Operating Temperature Range 温度范围						
Temp. Code	Temp.\ppm	±20	±25	±30	±50	±100
B	-20~70°C	○	○	○	○	○
C	-40~85°C		○	○	○	○
E	-40~105°C				○	○
F	-40~125°C					○

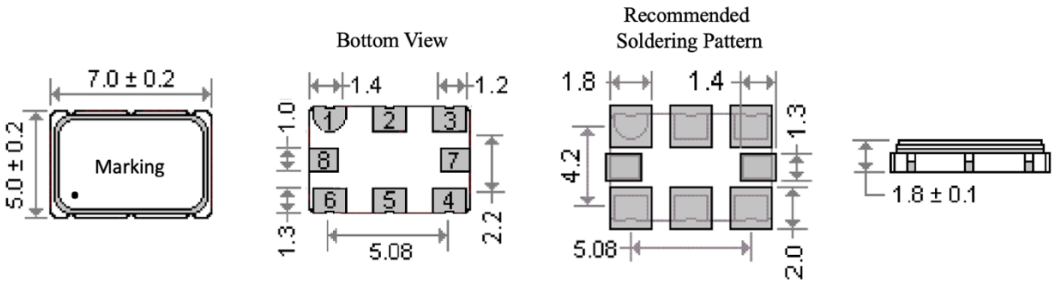
NOTE: Please consult for other specifications 若有其它规格需求请告知

Outline Dimensions (Unit: mm) 外形尺寸

KD508C



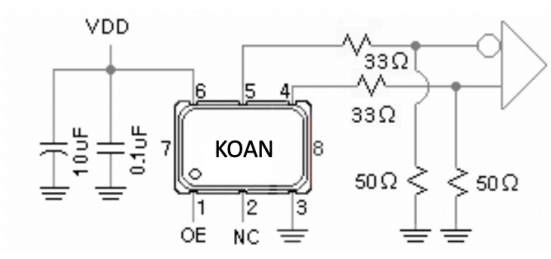
KD708C

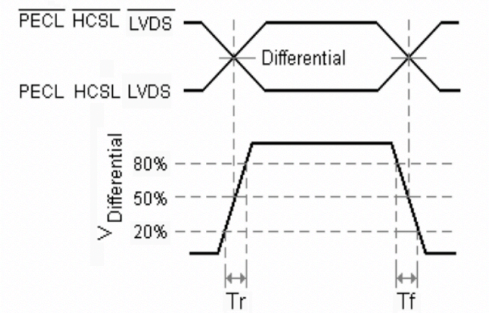


Pin	Connection
#1	Output Enable (OE)
#2	No Connection
#3	Ground
#4	Output
#5	Complementary
#6	Supply Voltage
#7	Do not Connect
#8	Do not Connect

Enable/Disable Function	
Input (#1)	Output (#4, #5)
Open	Enable
V_{IH} ≥80%V_{dd}	Enable
V_{IL} ≤20%V_{dd}	Disable

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

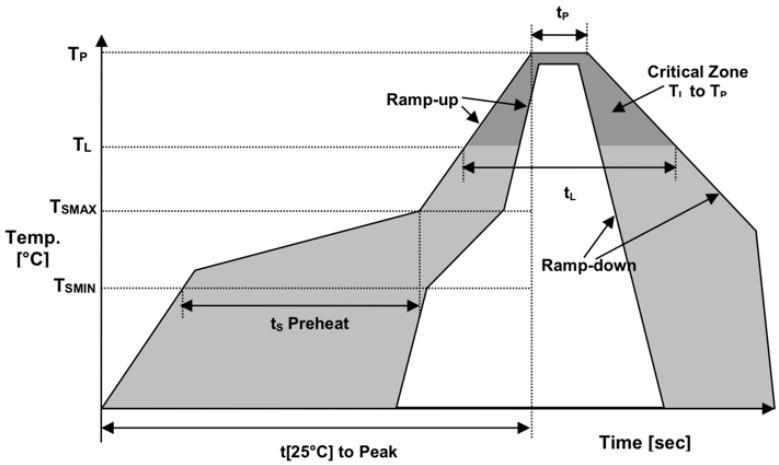




Part Number Guide 产品编号

KD508C	-	622.080	-	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
'KD': 差分晶振 **'508':**封装尺寸 SMD 5.0x3.2mm 8 pad **'C'**: 输出波形 HCSL		(In MHz)		18=1.8V 25=2.5V 33=3.3V		B: -20~+70°C C: -40~+85°C E: -40~+105°C F: -40~+125°C		10 = ±10ppm 20 = ±20ppm 30 = ±30ppm 50 = ±50ppm 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