KOAN® **Product Information (产品介绍)**

Clock Oscillator (时钟振荡器) - KD508D/KD708D

■ Feature 特征

Programmable differential (CMOS, PECL, LVDS, CML, HCSL output logic) clock oscillator with short lead time; High frequency up to 2.1GHz; 150fs typical phase jitter 可编程差分输出振荡器,超高频低抖动

■ 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	KD508D KD708D
Frequency Range	频率范围	150MHz ~ 2.1GHz
Supply Voltage	供给电压	+1.8V/2.5V/3.3V (±10%)
Output Logic	输出波形	LVDS
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	工作电流	75mA typ.; 90mA max
Output Load	输出负载	100Ω between output and comp. 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	0.4ns 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	1.4V typ. 1.6V max 1.1V typ. 0.9V min
RMS Jitter	抖动	150 fs typ.; 200fs 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	±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

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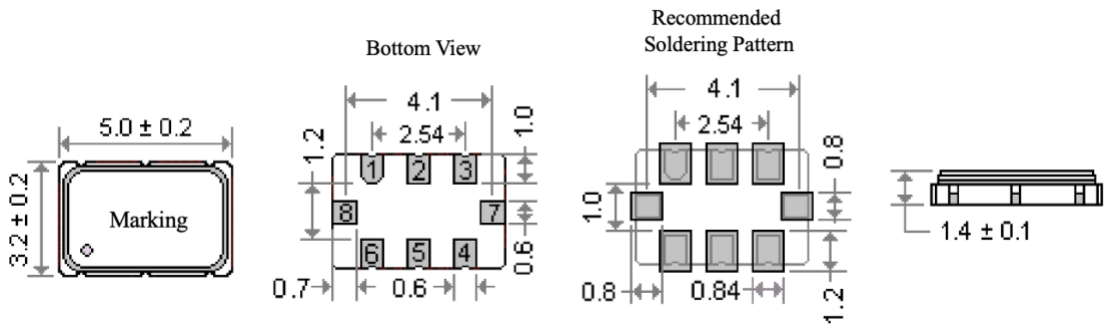
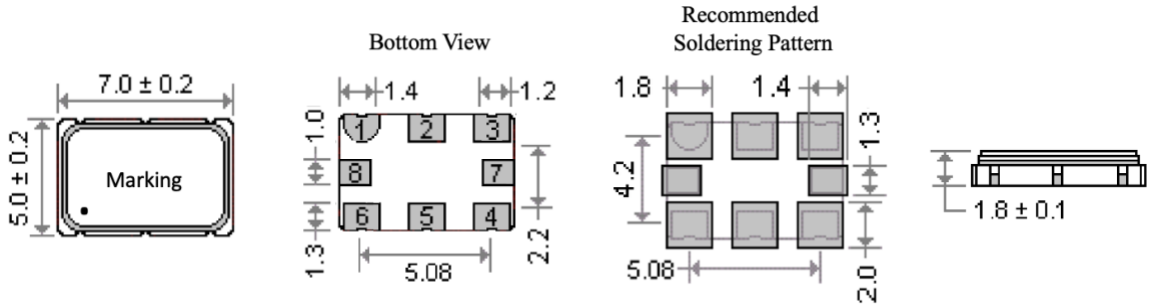
Outline Dimensions (Unit: mm) 外形尺寸

KD508D



KD708D



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

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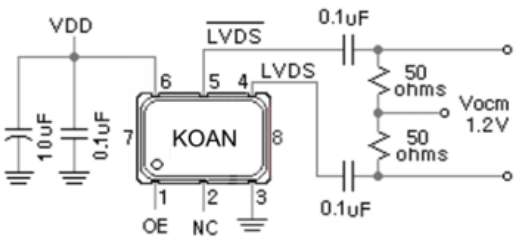
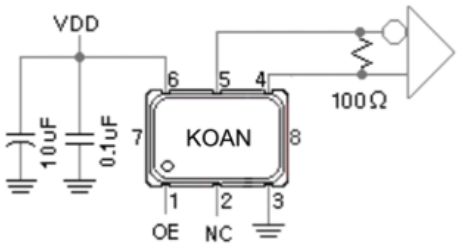
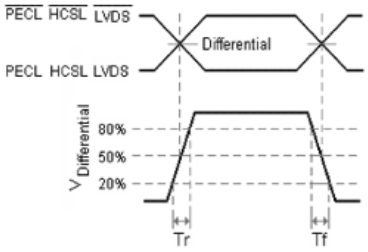
Test Circuit and Output Waveforms 测试电路图及输出波形



LVDS TEST CIRCUIT FOR 1.8V ONLY



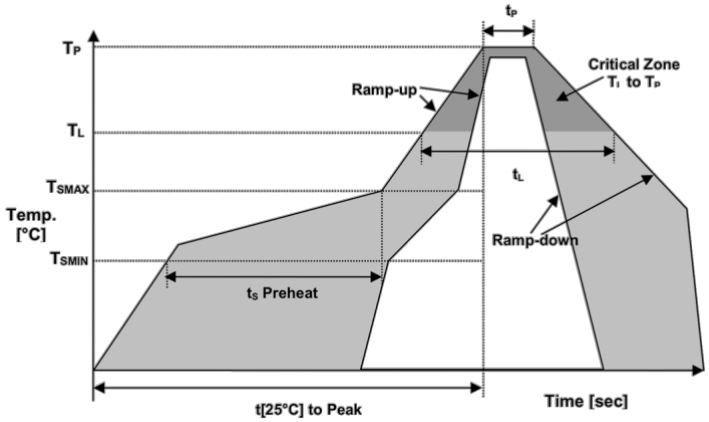
LVDS TEST CIRCUIT FOR 2.5/3.3V ONLY



Part Number Guide 产品编号

KD708D	-	622.080	-	33	-	C	-	30	-	
封装	-	**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 K=KOAN D=差分 **'708':**封装尺寸 SMD 7.0x5.0mm 8 pad **'D':**输出波形 LVDS				18=1.8V 25=2.5V 33=3.3V		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		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

Revision 版本

版本 Rev.	修改页 Revise Page	修改内容 Revise Contents	日期 Date	修改人 Reviser
1.0	2	Pin Description	2022.6.20	JZ