时钟振荡器 Clock Oscillator: KD326D

Feature 特征

- Miniature 3.2x2.5mm package, ideal for space-constrained designs 小型 3225 尺寸，适合空间受限的设计
- LVDS differential output suitable for high-speed and low-noise applications 差分输出适合高速，低噪声的信号传输要求
- Ultra-low phase jitter 0.2ps RMS from 12kHz to 20MHz 超低相位抖动
- Support frequency range up to 1.5GHz, supports demanding high-speed application 宽频率范围，最高可到 1.5GHz
- Excellent for high-performance clocking in networking, communication, industrial, and computing systems 适用于网络通信，工业控制

General Specifications 规格参考

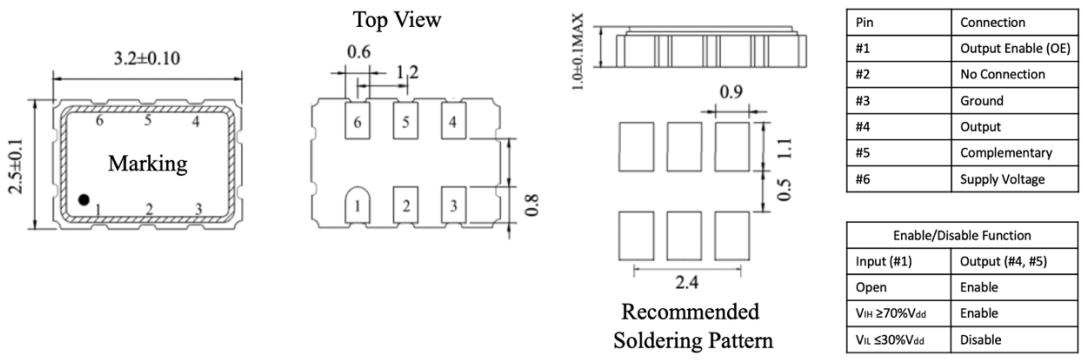
PARAMETER	性能参数	KD326D	
Frequency Range	频率范围	10MHz ~ 200MHz	10MHz~1.5GHz
Supply Voltage	供给电压	+1.8V/2.5V/3.3V (±10%)	+2.5V/3.3V (±10%)
Output Logic	输出波形	LVDS	
Frequency Tolerance	调整频差	±30ppm max	
Frequency Stability	温度频差	见下表	
Operating Temperature Range	温度范围	见下表	
Current Consumption	工作电流	16mA typ.; 27mA max	
Output Load	输出负载	100Ω between output and comp. 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: 10ms max Disable: 0.2μs max	Enable: 200ns max Disable: 50ns 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 (12KHz~20MHz)	抖动	0.2ps typ.; 0.5ps max	1.0ps typ. (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

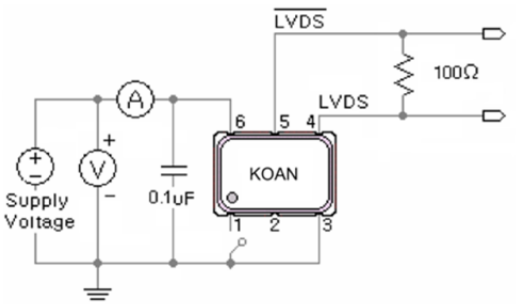
KD326D

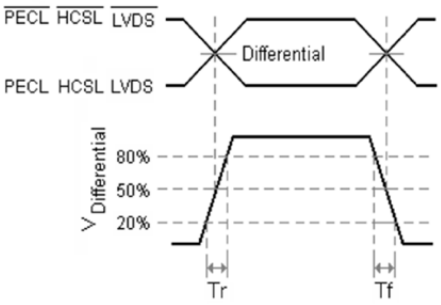


Pin	Connection
#1	Output Enable (OE)
#2	No Connection
#3	Ground
#4	Output
#5	Complementary
#6	Supply Voltage

Enable/Disable Function	
Input (#1)	Output (#4, #5)
Open	Enable
V_{IH} ≥70%V_{dd}	Enable
V_{IL} ≤30%V_{dd}	Disable

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

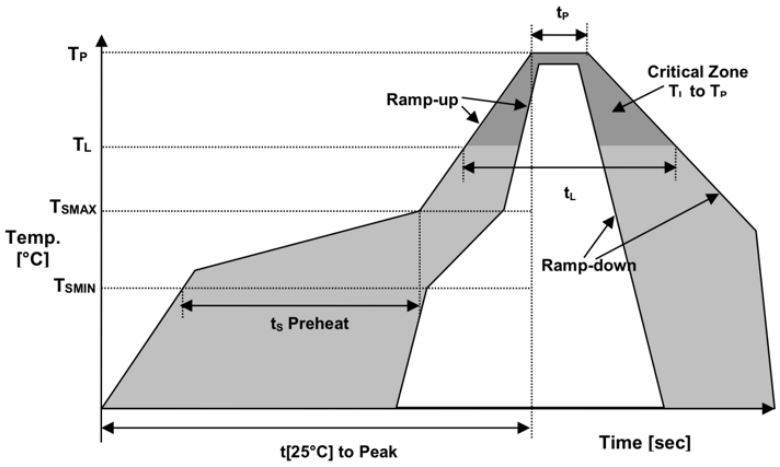




■ Part Number Guide 产品编号

KD326D	-	20.000	-	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': 差分系列 **'326':**封装尺寸 SMD 3.2x2.5mm 6 pad **'D'**: 输出波形 LVDS		(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