

时钟振荡器 Clock Oscillator: KD706D

■ Feature 特征

- Low phase jitter 0.6ps RMS from 12kHz to 20MHz 超低相位抖动
- Low current consumption 24mA for 622.080MHz at 3.3V 低功耗
- 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

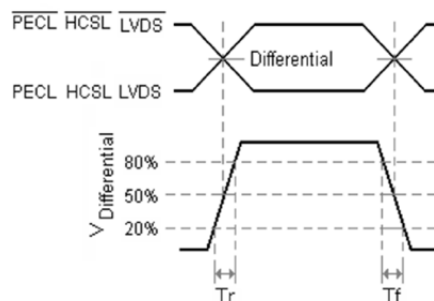
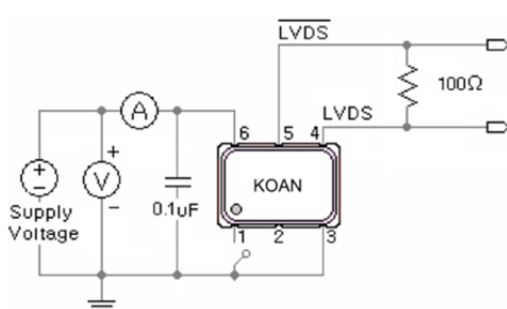
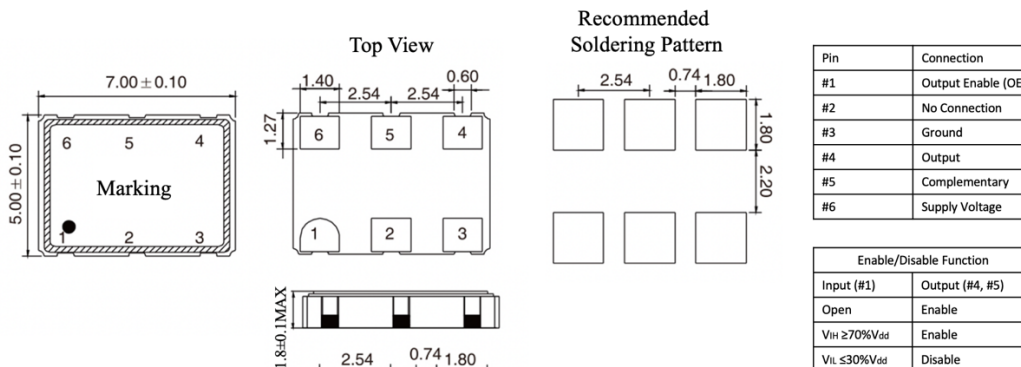


■ General Specifications 规格参考

PARAMETER	性能参数	KD706D	
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	38mA max
Output Load	输出负载	100Ω between output and comp. output	
Start-up Time	起振时间	5.0ms typ.; 10.0ms 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.
Storage Temperature Range	储存温度范围	-55°C ~ +125°C	
Aging Per Year	老化率	±3ppm ~ ±5ppm/year	

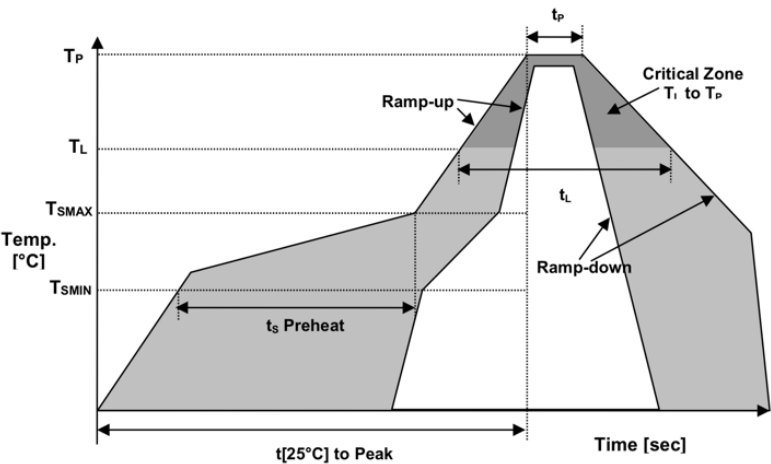
Frequency Stability 温度频差 VS Operating Temperature Range 温度范围						
Temp. Code	Temp.\ppm	±10	±20	±30	±50	±100
B	-20~70°C	○	○	○	○	○
C	-40~85°C		○	○	○	○
D	-55~85°C			○	○	○
E	-55~105°C				○	○
F	-55~125°C				○	○

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

KD706D

<u>KD706D</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’: 差分系列						B: -20~+70°C		10 = ±10ppm		
‘706’:封装尺寸				18=1.8V		C: -40~+85°C		20 = ±20ppm		
SMD 7.0x5.0mm 6 pad		(In MHz)		25=2.5V		D: -55~+85°C		30 = ±30ppm		‘NS’:特殊要求
‘D’: 输出波形				33=3.3V		E: -55~+105°C		50 = ±50ppm		
LVDS						F: -55~+125°C		100 = ±100ppm		

■ 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 $t[25^{\circ}C]$ to peak temperature	25度到最高温度时间	$t[25^{\circ}C]$ 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
0	N/A	Initial issue	2021.12.27	JH
1.0	2	Pin description	2022.06.20	JZ
1.1	1	Specs update	2024.03.19	JZ