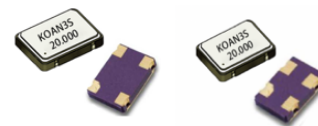


时钟振荡器 Clock Oscillator: KS2520 KS3225 KS5032 KS7050

■ Feature 特征

- Miniature package for space-saving designs 小型封装，节省空间
- Compatible with CMOS and TTL logic circuits for versatile integration 兼容 CMOS/TTL 逻辑电路
- Standards tri-state output 标准三态输出
- Available in multiple voltage options to suit different system requirements 多电压选择，满足不同系统需求



■ General Specifications 规格参考

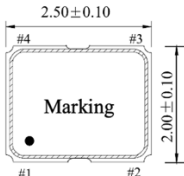
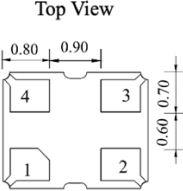
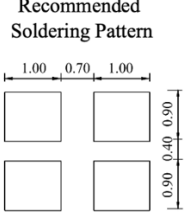
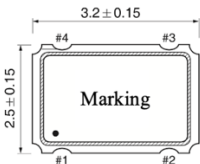
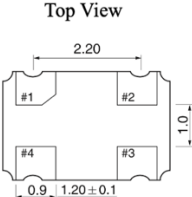
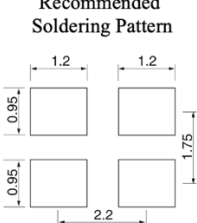
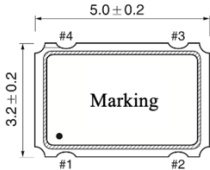
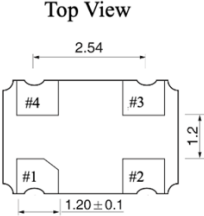
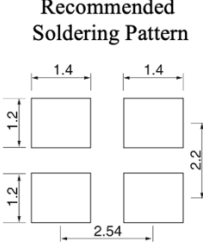
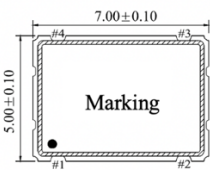
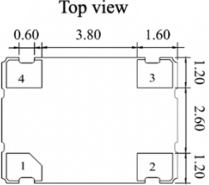
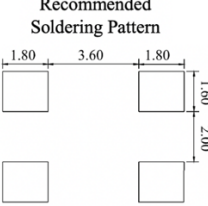
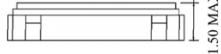
PARAMETER	性能参数	KS2520 KS3225 KS5032 KS7050		
Frequency Range	频率范围	32.768KHz, 14KHz~100KHz		
Supply Voltage	供给电压	+1.8V (±10%)	+2.5V(±10%)	+3.3V(±10%)
Output Logic	输出波形	CMOS		
Frequency Tolerance	调整频差	±5ppm ~ ±30ppm		
Frequency Stability	温度频差	见下表		
Operating Temperature Range	温度范围	见下表		
Current Consumption	工作电流	40μA typ.; 60μA max		
Output Load	输出负载	15pF		
Start-up Time	起振时间	30ms max		
Duty Cycle	占空比	45~55%		
Rise & Fall Time	上升下降时间	30ns max		
Output Logic High "1"	输出电平 高	0.9Vdd min		
Output Logic Low "0"	输出电平 低	0.1Vdd max		
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

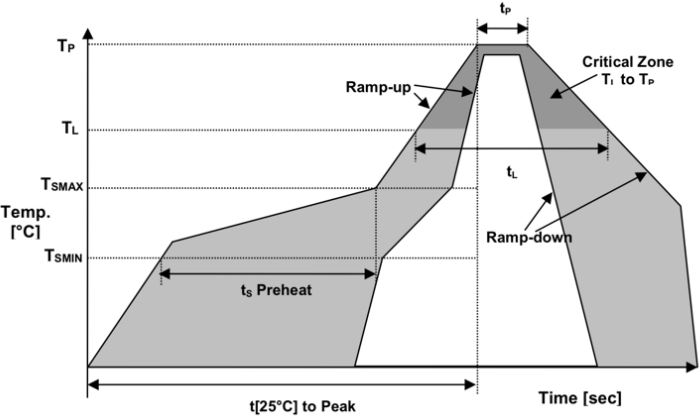
Outline Dimensions (Unit: mm) 外形尺寸

KS2520	   																				
KS3225	   																				
KS5032	   																				
KS7050	   																				
	<table border="1"> <thead> <tr> <th>Pin</th><th>Connection</th></tr> </thead> <tbody> <tr> <td>#1</td><td>Output Enable (OE)</td></tr> <tr> <td>#2</td><td>Ground</td></tr> <tr> <td>#3</td><td>Output</td></tr> <tr> <td>#4</td><td>Supply Voltage</td></tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="2">Enable/Disable Function</th></tr> </thead> <tbody> <tr> <th>Input (#1)</th><th>Output (#3)</th></tr> <tr> <td>Open</td><td>Enable</td></tr> <tr> <td>$V_{IH} \geq 70\%V_{dd}$</td><td>Enable</td></tr> <tr> <td>$V_{IL} \leq 30\%V_{dd}$</td><td>Disable</td></tr> </tbody> </table>	Pin	Connection	#1	Output Enable (OE)	#2	Ground	#3	Output	#4	Supply Voltage	Enable/Disable Function		Input (#1)	Output (#3)	Open	Enable	$V_{IH} \geq 70\%V_{dd}$	Enable	$V_{IL} \leq 30\%V_{dd}$	Disable
Pin	Connection																				
#1	Output Enable (OE)																				
#2	Ground																				
#3	Output																				
#4	Supply Voltage																				
Enable/Disable Function																					
Input (#1)	Output (#3)																				
Open	Enable																				
$V_{IH} \geq 70\%V_{dd}$	Enable																				
$V_{IL} \leq 30\%V_{dd}$	Disable																				

Part Number Guide 产品编号

<u>KS3225</u>	-	<u>32.768</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
‘KS’: 非差分系列						B: -20~+70℃		10 = ±10ppm		‘NS’:特殊要求
‘3225’:封装尺寸				18=1.8V		C: -40~+85℃		20 = ±20ppm		
SMD3.2x2.5mm				25=2.5V		D: -55~+85℃		30 = ±30ppm		
kHz				33=3.3V		E: -55~+105℃		50 = ±50ppm		
						F: -55~+125℃		100 = ±100ppm		

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	2020.09.27	JZ
1.0	2	Pin description	2022.06.20	JZ
2.0	1, 2	Specs update	2025.12.04	JZ