

温补振荡器 Temperature Compensated Crystal Oscillator: KT3225

Feature 特征

- Compact 3.2x2.5mm SMD package with fixed frequency 32.768kHz CMOS output 小尺寸贴片温补晶振 频率为 32.768kHz，输出波形为 CMOS
- Excellent frequency stability up to ±5ppm max 频率稳定性好，最大±5ppm
- Ultra-low current consumption ideal for battery-powered device 超低电流消耗，适合电池供电应用
- Ideal for real-time clock, wearable, IoT, and portable electronics 广泛应用实时时钟，可穿戴设备，物联网，及便携式电子产品



General Specifications 规格参考

PARAMETER	性能参数	KT3225
Supply Voltage	工作电压	+1.8V; +2.5V; +3.0V; +3.3V; +5.0V
Frequency Range	频率范围	32.768kHz
Output Logic	输出波形	CMOS
Output Load	输出负载	15pF
Output Logic High '1' Output Logic Low '0'	输出电平 高 输出电平 低	VDD-0.4V min; IOH=0.1mA 0.4V max; IOL=-0.1mA
Initial Calibration Tolerance	调整频差	±1.5ppm max
Current Consumption	工作电流	0.79~2.05uA typ.
Frequency Stability 频率温度稳定度 VS		
Operating Temperature Range	温度范围	-40~+85°C
Frequency Stability	温度频差	±5ppm max
Aging	老化率	±3.0ppm/year max
Voltage Change	电压变化	±0.2ppm max for ±5% input voltage change
Load Change	负载变化	±0.2ppm max for ±10% load condition change
Reflow	回流焊	±1.0ppm max. 1 reflow and measured 24hs afterwards
Duty Cycle	占空比	45~55%
Rise & Fall Time	上升下降时间	100ns max.
Start-up Time	起振时间	1s max at +25°C; 3s max over -40~+85°C
Storage Temperature Range	储存温度范围	-55°C~+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

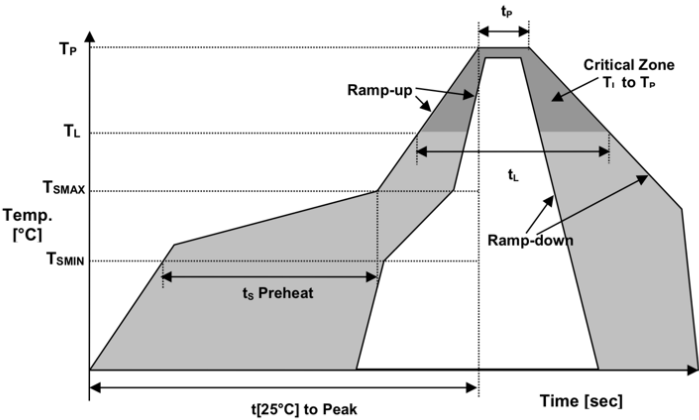
KT3225

Pin	Connection
#1	Output Enable
#2	Ground
#3	Output
#4	Supply Voltage

Part Number Guide 产品编号

<u>KT3225</u>	-	<u>32.768</u>	-	<u>33</u>	-	<u>C</u>	-	<u>03</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
‘KT’:温补系列				18=1.8V				01 = ±1.0ppm		‘NS’:特殊要求
KT: TCXO				25=2.5V				02 = ±2.0ppm		
‘3225’:封装尺寸		(In kHz)		30=3.0V		C: -40~+85°C		03 = ±3.0ppm		
3.2x2.5mm				33=3.3V				05 = ±5.0ppm		
				50=5.0V						

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
0	N/A	Initial issue	2020.09.27	JZ
1.0	2	Part number guide	2022.06.13	JH