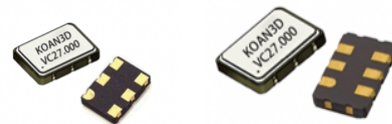


压控振荡器 Voltage Controlled Crystal Oscillator: KV32D KV50D KV70D

Feature 特征

- VCXO allow for precise frequency tuning over typical range $\pm 80 \sim 200$ ppm by adjusting the voltage on the control (Vc) pin 压控晶振可以通过调节控制引脚上的电压进行微调，频率微调范围为 $\pm 80 \sim \pm 200$ ppm
- Wide frequency range up to 2.1GHz 频率范围广，最高到 2.1GHz
- LVDS differential output for high-speed, low-noise transmission LVDS 差分输出，适合高速，低噪声信号传输
- Ideal for systems requiring frequency alignment and synchronization 适用于频率同步和微调系统



General Specifications 规格参考

PARAMETER	性能参数	KV32D KV50D KV70D	
Frequency Range	频率范围	15.0MHz ~ 2.1GHz	
Supply Voltage	供给电压	+2.5V ($\pm 10\%$)	+3.3V ($\pm 10\%$)
Center Control Voltage	中心控制电压	1.25Vdc (0.25V~2.25V)	1.65Vdc (0.3V~3.0V)
Output Logic	输出波形	LVDS	
Output Load	输出负载	100 Ω	
Frequency Tolerance	调整频差	± 20 ppm	
Current Consumption	工作电流	50mA max	
Output Logic High "1"	输出电平 高	1.4V typical; 1.6V max	
Output Logic Low "0"	输出电平 低	1.1V typical; 0.9V min	
Frequency Pulling Range	压控范围	$\pm 80 \sim \pm 200$ ppm	
Integrated Phase Jitter	抖动	0.6ps max (12KHz~20MHz)	
Input Impedance	输入电阻	1M Ω typical	
Rise & Fall Time	上升下降时间	0.8ns max	
Start-up Time	起振时间	5ms typical, 10ms max	
Output Enable/Disable Time	启动/禁用时间	Enable: 200ns max. Disable: 50ns max.	
Linearity	非线性误差	$\pm 5\%$ typical, $\pm 10\%$ max	
Duty Cycle	占空比	45~55%	
Modulation Bandwidth (-3dB)	调制宽带	10KHz min.	
Aging Per Year	年老化率	± 3 ppm ~ ± 5 ppm/year	
Storage Temperature Range	储存温度范围	$-55^{\circ}\text{C} \sim +125^{\circ}\text{C}$	

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 $^{\circ}\text{C}$	o	o	o	o	o
C	-40~85 $^{\circ}\text{C}$		o	o	o	o
D	-55~85 $^{\circ}\text{C}$				o	o
E	-55~105 $^{\circ}\text{C}$				o	o
F	-55~125 $^{\circ}\text{C}$					o

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

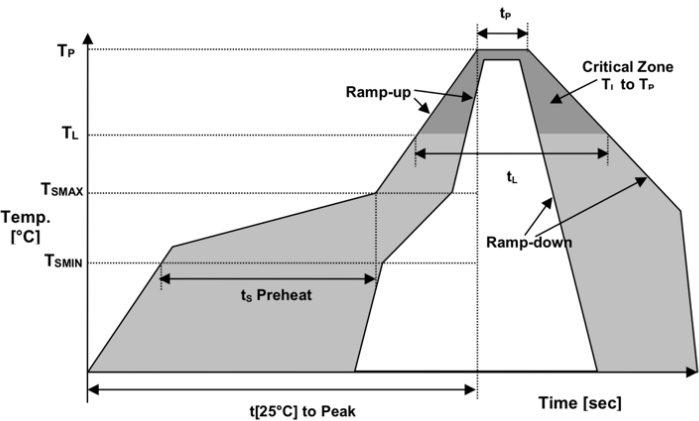
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Part Number Guide 产品编号

KV32D	-	27.000	-	100	-	33	-	C	-	30	-	NS
↓		↓		↓		↓		↓		↓		↓
型号	-	标称频率	-	压控范围	-	工作电压	-	工作温度	-	温度频差	-	特殊要求

‘KV’: 压控系列 ‘32’: 封装尺寸 3.2x2.5mm ‘D’: 输出波形 LVDS	(In MHz)	80=±80ppm	25=2.5V 33=3.3V	B: -20~+70°C	10 = ±10ppm	‘NS’:特殊要求
		100=±100ppm		C: -40~+85°C	20 = ±20ppm	
		150=±150ppm		D: -55~+85°C	30 = ±30ppm	
		200=±200ppm		E: -55~+105°C	50 = ±50ppm	
				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°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
1.1	2	Pin description	2022.02.24	JZ
1.2	1	Specs update	2025.12.04	JZ