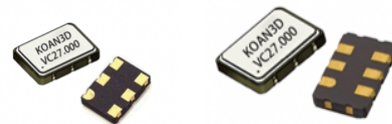


压控振荡器 Voltage Controlled Crystal Oscillator: KV32T KV50T KV70T

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
- CMOS output with wide frequency range, up to 245MHz 频率范围广，最高 245MHz
- Low phase jitter 0.6ps RMS 低相位抖动，满足高速数字系统要求
- Ideal for high performance communication, video, and industrial timing systems 适用于高性能通信，视频处理，工业控制等
- Available in compact packages such as 3225, 5032, 7050 可选多种尺寸



General Specifications 规格参考

PARAMETER	性能参数	KV32T KV50T KV70T	
Frequency Range	频率范围	10.0 ~ 245.0MHz	
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	CMOS	
Output Load	输出负载	15pF	
Frequency Tolerance	调整频差	± 20 ppm	
Current Consumption	工作电流	40mA 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	
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	10ns 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 $\sim$ ± 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°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

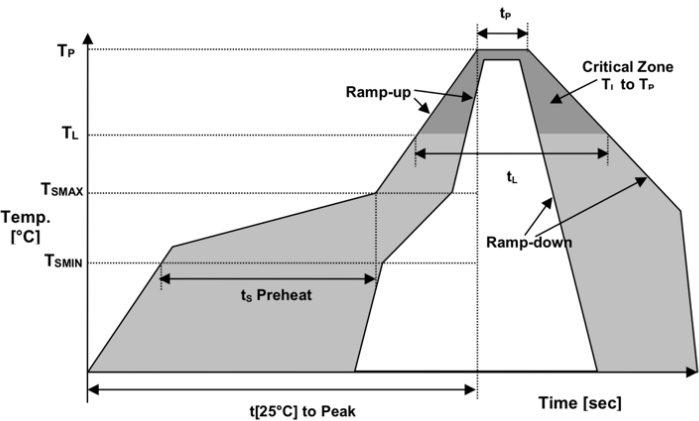
■ Outline Dimensions (Unit: mm) 外形尺寸

KV32T															
KV50T															
KV70T															
	<table><tr><th>Pin</th><th>Connection</th></tr><tr><td>#1</td><td>Control Voltage</td></tr><tr><td>#2</td><td>Tri-State</td></tr><tr><td>#3</td><td>Ground</td></tr><tr><td>#4</td><td>CMOS: Output; PECL or LVDS: Differential</td></tr><tr><td>#5</td><td>CMOS: N.C.; PECL or LVDS: Complementary</td></tr><tr><td>#6</td><td>Supply Voltage</td></tr></table>	Pin	Connection	#1	Control Voltage	#2	Tri-State	#3	Ground	#4	CMOS: Output; PECL or LVDS: Differential	#5	CMOS: N.C.; PECL or LVDS: Complementary	#6	Supply Voltage
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■ Part Number Guide 产品编号

KV32T	-	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				80=±80ppm				B: -20~+70°C		10 = ±10ppm		
‘32’: 封装尺寸				100=±100ppm		25=2.5V		C: -40~+85°C		20 = ±20ppm		
3.2x2.5mm		(In MHz)		150=±150ppm		33=3.3V		D: -55~+85°C		30 = ±30ppm		‘NS’:特殊要求
‘T’: 输出波形				200=±200ppm				E: -55~+105°C		50 = ±50ppm		
CMOS								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