

Voltage Controlled Clock Oscillator (压控振荡器) - KV32D/KV50D/KV70D

Feature 特征

Frequency pulling range from $\pm 100 \sim \pm 200$ ppm with wide frequency range; 0.6ps phase jitter. 压控范围 $\pm 100 \sim \pm 200$ ppm 超高频, 低相噪抖动



Applications 应用

Frequency electrical calibration, high-frequency network application system, military anti-interference communication 频率电校准, 高频网络应用系统, 军事防干扰通讯

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" Output Logic Low "0"	输出电平 高 输出电平 低	1.4V typical; 1.6V max 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	老化率	± 3 ppm ~ ± 5 ppm/year	
Storage Temperature Range	储存温度范围	-55 $^{\circ}$ C ~ +125 $^{\circ}$ 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 $^{\circ}$ C	o	o	o	o	o
C	-40~85 $^{\circ}$ C		o	o	o	o
D	-55~85 $^{\circ}$ C			o	o	o
E	-55~105 $^{\circ}$ C				o	o
F	-55~125 $^{\circ}$ C				o	o

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

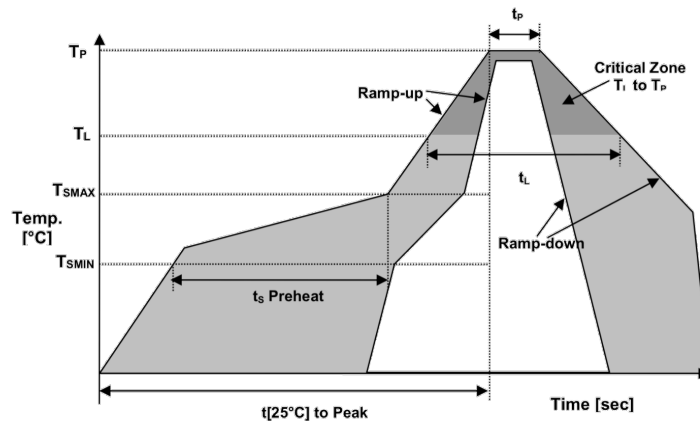
■ Outline Dimensions (Unit: mm) 外形尺寸

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■ Part Number Guide 产品编号

<u>KV</u>	<u>70</u>	<u>D</u>	-	<u>27.000</u>	-	<u>100</u>	-	<u>33</u>	-	<u>C</u>	-	<u>30</u>	-	<u>NS</u>
↓	↓	↓		↓		↓		↓		↓		↓		↓
系列	封装	输出波形	-	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=VCXO 压控振荡器	封装尺寸 70=7050 50=5032 32=3225	“ ”=CMOS D=LVDS	-	(In MHz)	-	100=±100ppm 150=±150ppm 200=±200ppm	-	25=2.5V 33=3.3V 50=5.0V	-	B: -20~+70°C C: -40~+85°C D: -55~+85°C E: -55~+105°C F: -55~+125°C	-	10 = ±10ppm 20 = ±20ppm 30 = ±30ppm 50 = ±50ppm 100 = ±100ppm	-	‘NS’:特 殊要求

■ 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
1.0	NA	-	2021.12.25	JH
1.1	2	Pin Description	2022.02.24	JZ
1.2	1	Specs Update	2024.3.19	JZ