

压控振荡器 Voltage Controlled Crystal Oscillator: KV14S

Feature 特征

- VCXO allow for precise frequency tuning over typical range $\pm 80\text{ppm}$ min 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 $\pm 80\text{ppm}$ min.
- True sine wave output for low distortion and superior signal integrity 正弦波输出有极低失真和良好信号完整性
- Ideal for analog modulation system, RF circuits, and precision timing application 适用于模拟调制系统，射频电路，高精度定时应用



General Specifications 规格参考

PARAMETER	性能参数	KV14S	
Frequency Range	频率范围	10.0~250.0MHz	10.0~156.0MHz
Supply Voltage	供给电压	+3.3V($\pm 5\%$)	+5.0V($\pm 10\%$)
Center Control Voltage	中心控制电压	1.65Vdc (0.3V~3.0V)	2.5Vdc (0.5V~4.5V)
Output Logic	输出波形	True Sine	
Output Load	输出负载	50 Ω	
Harmonics	谐波抑制	< -30dBc (Frequency dependent)	
Frequency Tolerance	调整频差	$\pm 20\text{ppm}$	
Current Consumption	工作电流	20mA max.	40mA max
Output Level	输出级别	+3dBm min.	+5dBm min.
Frequency Pulling Range	压控范围	$\pm 80\text{ppm}$ min.	
Phase Noise (e.g.125.0MHz)	相位噪声	-75dBc/Hz@10Hz; -128dBc/Hz@100KHz	
Input Impedance	输入电阻	> 10K Ω	
Start-up Time	起振时间	2ms typ.; 6ms max.	
Linearity	非线性误差	$\pm 10\%$ max.	
Modulation Bandwidth (-3dB)	调制宽带	10KHz min.	
Aging Per Year	年老化率	$\pm 3\text{ppm}$ ~ $\pm 5\text{ppm}$ /year	
Storage Temperature Range	储存温度范围	-55°C ~ +125°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

KV14S

Side view of the KV14S component. Dimensions shown: 0.71 (height of the top part), 5.08 max (total height), 4.0 min (height of the base), 0.45 (width of the base), and Solder DIP (label for the base).

Top view of the KV14S component. Dimensions shown: 20.8 max (width), 13.2 max (height), 10.7 (width of the central area), 15.24 (width of the outer area), 5.30 (width of the central area), and 7.62 (height of the outer area). A terminal #1 indication is shown.

Terminal #1 indication

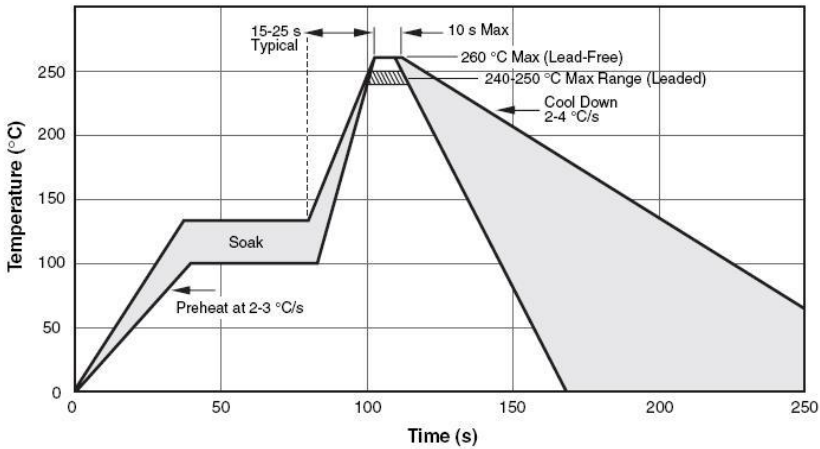
Top view of the KV14S component. Dimensions shown: 20.8 max (width), 13.2 max (height), 10.7 (width of the central area), 15.24 (width of the outer area), 5.30 (width of the central area), and 7.62 (height of the outer area). A terminal #1 indication is shown.

Pin	Connection
#1	Control Voltage
#7	Ground
#8	Output
#14	Supply Voltage

Part Number Guide 产品编号

<u>KV14S</u>	-	<u>27.000</u>	-	<u>80</u>	-	<u>33</u>	-	<u>C</u>	-	<u>30</u>	-	<u>NS</u>
↓		↓		↓		↓		↓		↓		↓
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								B: -20~+70°C		10 = ±10ppm		‘NS’:特殊要求
‘14’: 封装尺寸				80=±80ppm				C: -40~+85°C		20 = ±20ppm		
DIP-14				100=±100ppm				33=3.3V		30 = ±30ppm		
‘S’: 输出波形				150=±150ppm				50=5.0V		50 = ±50ppm		
True Sine				200=±200ppm				E: -55~+105°C		100 = ±100ppm		
								F: -55~+125°C				

Wave Solder Profile 波峰焊



Average Ramp-up Rate	升温速度	~200°C/Second
Heating Rate during preheat	预热速度	1~2°C/second typ.; 4°C/second max
Final Preheat Temperature Ts	最终预热温度	~130°C
Peak Temperature Tp	最高温度	260°C
Time within +0°C/-5°C of actual temperature tp	实际温度时间	10 seconds
Ramp-Down Rate	降温速度	5°C/second max

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	1	Specs update	2025.12.04	JZ