

TCXO Temperature Compensated Crystal Oscillators 温补晶振

TCVCXO Temperature Compensated Voltage Controlled Oscillators 温补压控晶振

一、应用

通讯、航空、航天、军事、移动通信、数字程控交换机、网络传输、接入网、光传输、雷达、导航、电子对抗、无线通信、测试设备、锁相环电路 SDH、SONET、ATM、WLL、PCS 基站、蜂窝基站、频率合成器

二、主要技术指标

1) Frequency Range 频率范围: 1.00-80.00MHz

2) Initial Calibration 频率准确度: A $\leq \pm 1.0\text{ppm}$ @25°C B $\leq \pm 0.5\text{ppm}$ @25°C

3) Frequency Adjustment 频率调整: 1 Ageing adjustment: $\geq \pm 5\text{ppm}$

2 No frequency adjustment

4) Operating Temperature 工作温度范围: C -20-+70°C D -40-+85°C E -55-+105°C

5) Frequency Stability 温度频率稳定度: F $\pm 0.28\text{ppm}$ G $\pm 0.5\text{ppm}$ H $\pm 1.0\text{ppm}$
I $\pm 1.5\text{ppm}$ J $\pm 2.0\text{ppm}$ K $\pm 2.5\text{ppm}$

6) Output Waveform 输出波形: 1 Sine 正弦波 2 Hcmos 方波 3 Clipped Sine 削峰正弦波

7) Supply Voltage 工作电压范围: L 3.3V $\pm 10\%$ M 5.0V $\pm 10\%$

8) Ageing 频率老化率: $\pm 1\text{ppm}$ maximum in first year, $\pm 3\text{ppm}$ maximum for 10 years

9) Phase Noise 相位噪声:

Frequency	10Hz	100Hz	1kHz	10kHz	100kHz
13.0MHz	-95 dBc/Hz	-120dBc/Hz	-135dBc/Hz	-140dBc/Hz	-145dBc/Hz

10) Package Outline 封装、尺寸:

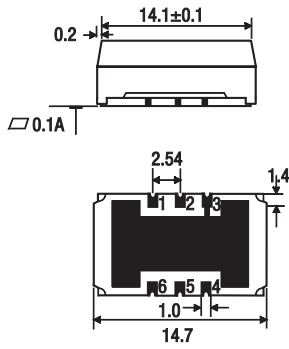
N DIP 21*13*5mm O DIP 18*12*5mm P DIP 20*20*10mm Q DIP 36*27*16mm
R SMD 5*3*1mm S SMD 7*5*2mm T SMD 9*7*3mm U SMD 14*9*6mm

11) Storage Temperature 储存温度范围: -55-+125°C

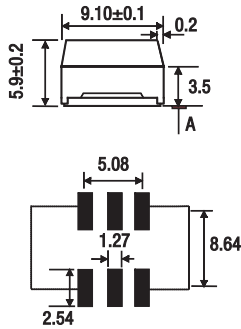
三、产品定型 RTT-10MHZ-B 2 D G 1 M S

	频率	准确度	频率调整	温度范围	稳定性	波形	电压	尺寸
RTT	10	B	2	D	G	1	M	S
RTT	10MHZ	$\pm 0.5\text{ppm}$ @25°C	No frequency adjustment	-40-+85 °C	\pm 0.5ppm	Sine	5.0V	SMD 7*5*2mm

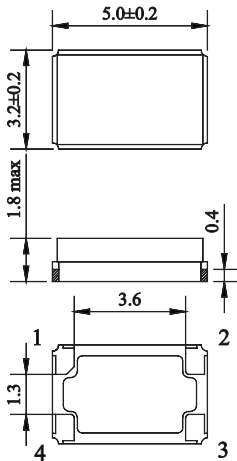
A Outline in mm - (scale 1:1)



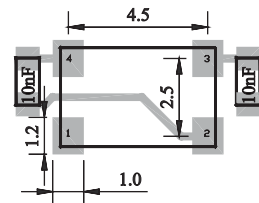
- Pad Connections**
 1 Voltage Control*
 2 Tri-state Control (Enable)*
 3 Ground
 4 Output
 5 Vref (HCMOS/ACMOS Only)*
 6 +Vs
 * Leave unconnected if not required



B Outline in mm



Recommended PCB pattern

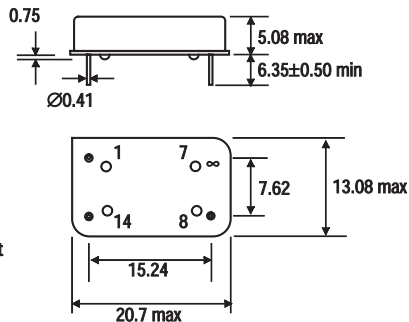


Pad Function

- 1 Voltage Control (leave unconnected in case the 'no frequency adjust' option has been ordered)
- 2 Ground
- 3 Output
- 4 Supply Voltage, Vs

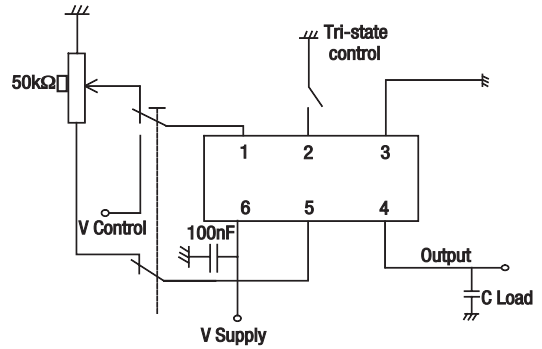
Low Profile option, 1.6mm max height.

C Outline in mm

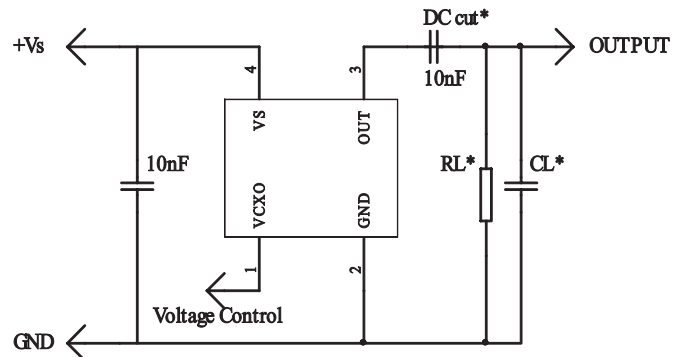


- Pin connections**
 1. Frequency Adjust
 7. Case Ground
 8. Output
 14. +Vs

Test Circuit



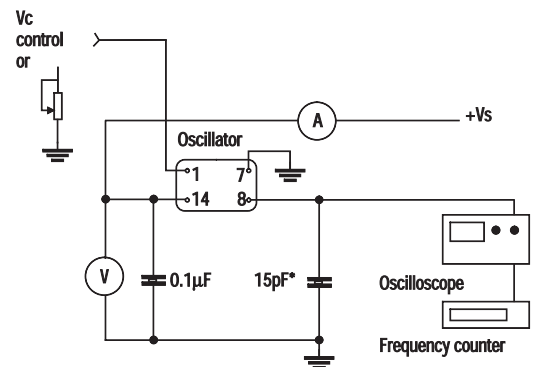
Test Circuit



*DC cut capacitor required for AC coupled Clipped sinewave.

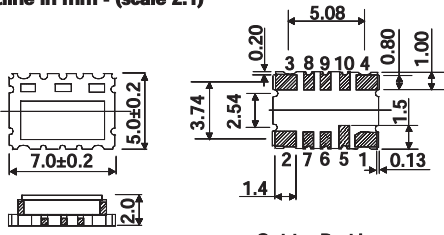
*Load 15pF (HCMOS) or 10kΩ // 10pF (Clipped Sinewave), inclusive of probe and jig capacitance.

Test Circuit - HCMOS

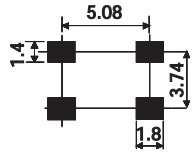


*Inclusive of jigging & equipment capacitance

D Outline in mm - (scale 2:1)



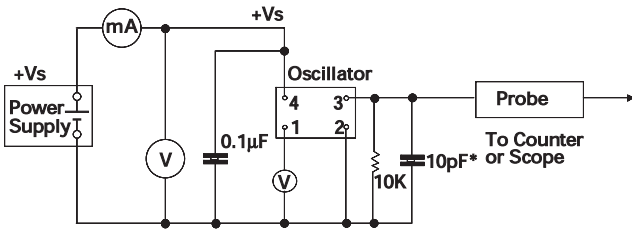
Solder Pad Layout



Pin Connections

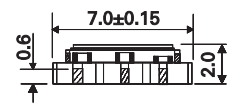
- 1.V con
- 2.GND
- 3.Output
- 4.+Vs

E Test Circuit



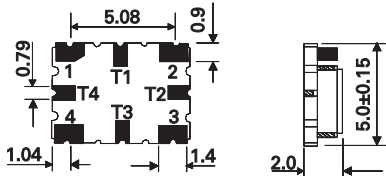
* Inclusive of jiggging and equipment

Outline in mm

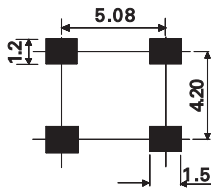


Pad Connections

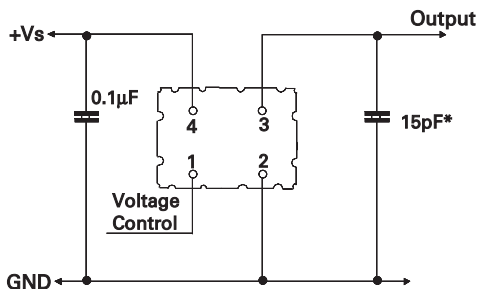
- 1. Voltage Control
- 2. GND
- 3. Output
- 4. +Vs
- T1, T2, T3, T4, Do Not Connect



Solder pad layout

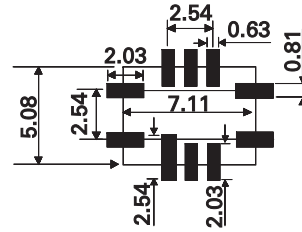


F Test Circuit

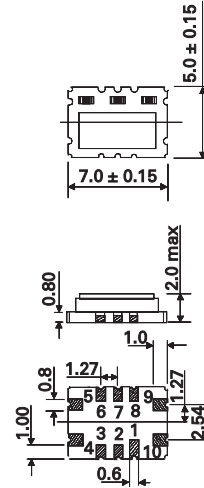


* inclusive of probe and jig capacitance

G Solder pad layout



Outline in mm



Pad Connections

- 1. V ref
- 2. N/C
- 3. DC Coupled Output (do not connect)
- 4. GND
- 5. Output
- 6. N/C
- 7. N/C
- 8. Tri-state Control (Enable)*
- 9. +Vs
- 10. Voltage Control*
- *leave unconnected if not required.

Test Circuit

