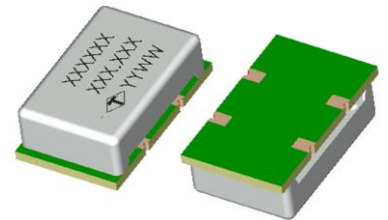


# High Frequency Very Low Noise/Low g-Sensitivity VCXO

## VLCU-Type series

### VLCU-Type Series in 14 x 9mm SMD package

VLCU-Type series is a high frequency high performance VCXO offering high frequency and very low phase noise/Low g-Sensitivity. The part comes in a small SMD package which makes it suitable for reflow soldering during pick and place assembly.



#### FEATURES

- **Low Phase Noise**
- **Low g-Sensitivity**
- Small SMD Package
- Low Power Consumption

#### APPLICATIONS

- Instrument
- Microwave Communication
- Test & Measurement
- Telecom Systems
- Satellite Communication

**RoHS Compliant Standard**

### ELECTRICAL SPECIFICATIONS

#### 1. OUTPUT (PIN = "R.F. OUTPUT")

	Parameter	Min.	Typ.	Max.	Unit	Test Condition
1.1.	Frequency (Fo)	50		125	MHz	Standard Frequency : 100MHz, 122.88MHz, 125MHz
1.2.	Frequency Stability (Overall)	-25		+25	ppm	Frequency stability includes frequency tolerance@25°C and frequency stability vs. operating temperature range and voltage variance and 10 years aging.
1.3.	Operating Temperature Range	-20°C ~ +70°C -40°C ~ +85°C			°C	
1.4.	Storage Temperature Range	-45°C ~ +90°C			°C	
1.5.	Waveform	Sine wave				
1.6.	Level	+10			dBm	
1.7.	Load		50		Ω	
1.8.	Harmonics			-30	dBc	
1.1.	Phase Noise (Max.)	100MHz	122.88MHz	125MHz		Refer to Table 1 : Ordering Information
1.2.		-84	-80	-80	dBc/Hz	@ 10Hz
1.3.		-117	-112	-112	dBc/Hz	@ 100Hz
1.4.		-144	-142	-142	dBc/Hz	@ 1KHz
1.5.		-165	-163	-163	dBc/Hz	@ 10KHz
1.6.		-172	-172	-172	dBc/Hz	@ 100KHz
1.7.		-175	-175	-175	dBc/Hz	@ 1MHz

## 2. ELECTRICAL FREQUENCY ADJUSTMENT (PIN = "VCO INPUT")

	Parameter	Min.	Typ.	Max.	Unit	Test Condition
2.1.	Pulling Range	+/-30			ppm	
2.2.	Control Voltage	0		+5.0	V	
2.3.	Slope	Positive				
2.4.	Center Voltage		+2.5		V	
2.5.	Linearity	-10		+10	%	
2.6.	Modulation Bandwidth	5			KHz	
2.7.	VC Input Impedance	1			Mohm	

## 3. INPUT POWER (PIN = "+VDC")

	Parameter	Min.	Typ.	Max.	Unit	Test Condition
3.1.	Voltage	+4.75	+5	+5.25	V	
3.2.	Current			30	mA	At maximum supply voltage

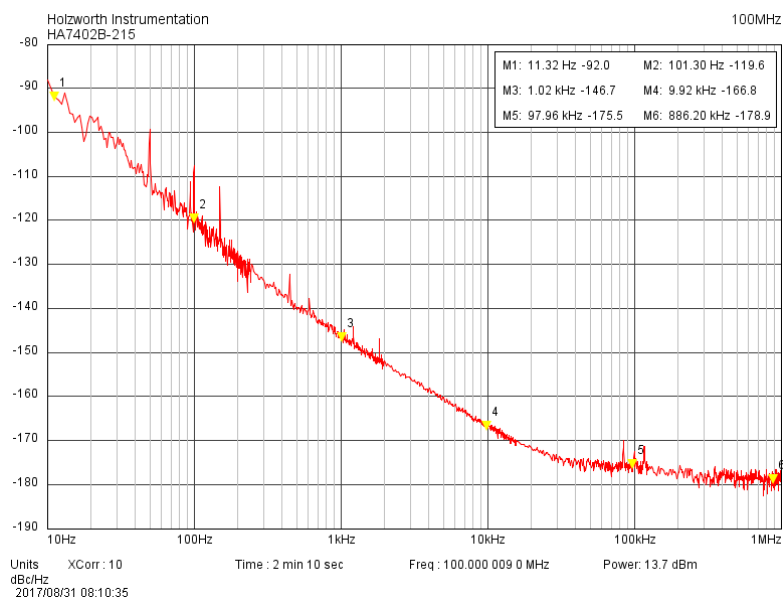
## 4. ENVIRONMENTAL

	Parameter	Reference Std.	Test Condition
4.1.	Vibration Test	DIN EN 60068-2-6	10~55Hz, 0.75mm Peak; 55~2000Hz, 10g Peak. 10 Cycles; 3 axis; 1Oct./min.
4.2.	Thermal Shock	DIN EN 60068-2-14	30 min. @ each temperature 10 cycles, Transfer<1min.; -40°C +/-3°C; 85°C +/-3°C
4.3.	Mechanical Shock	DIN EN 60068-2-27	6 shocks per axis, 100g; 6ms both directions

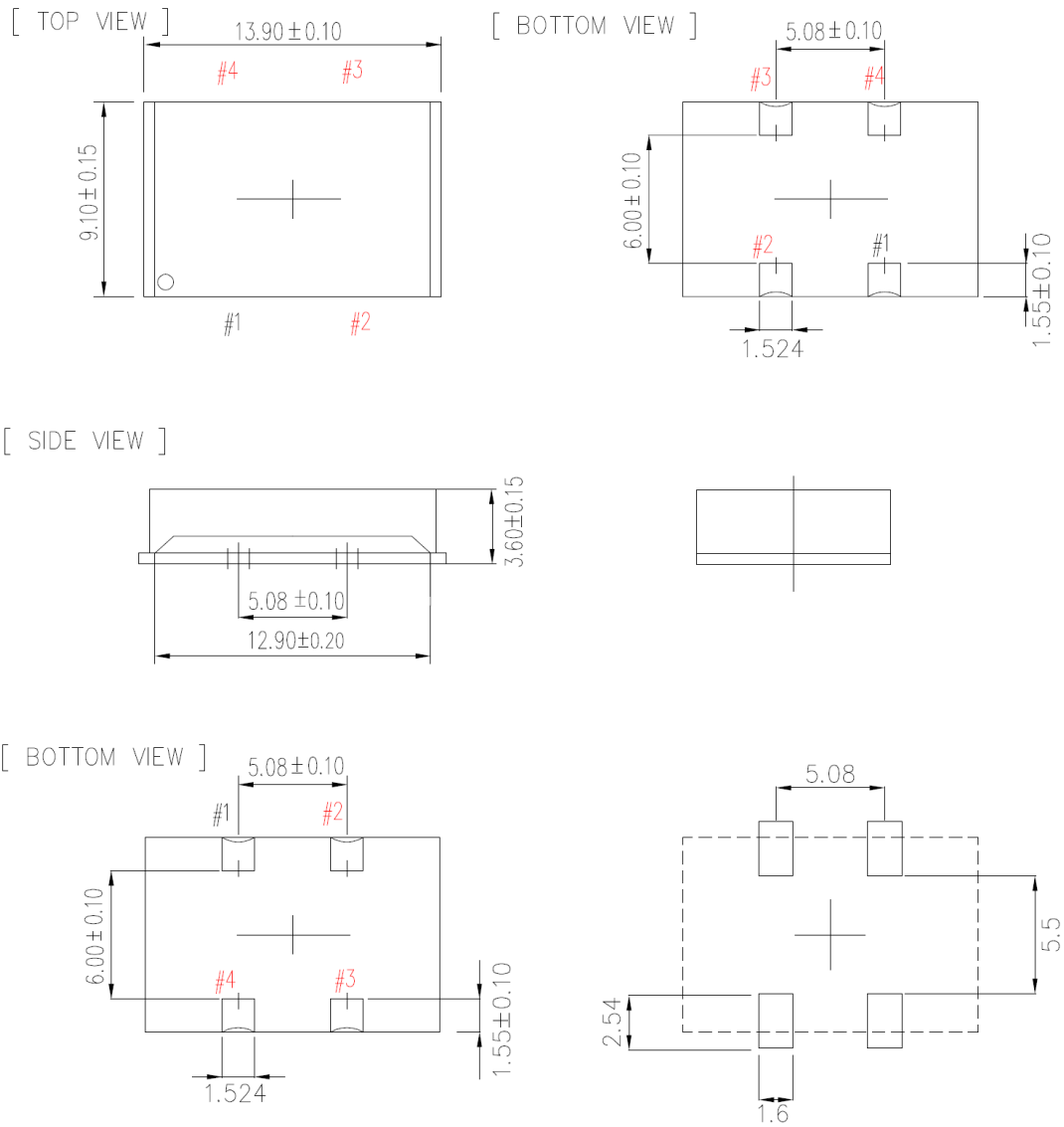
## Table 1 : ORDERING INFORMATION

-20°C ~ +70°C	VLCUWCWTFN-Frequency
-40°C ~ +85°C	VLCUWLWTFN-Frequency

## PHASE NOISE TEST DATA



## OUTLINE DRAWING



Recommended Soldering Pattern

## Pin FUNCTIONS

Pin	Function
<b>#1</b>	Vcon
<b>#2</b>	GND
<b>#3</b>	Output
<b>#4</b>	VDD