

# High Frequency, Very Low Noise and Low g-Sensitivity VCXO VLCU-Type series

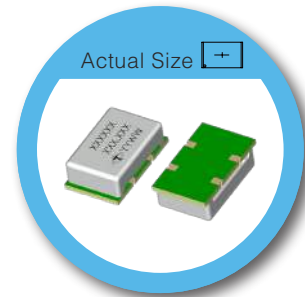
## 14 x 9mm SMD package

### FEATURE

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

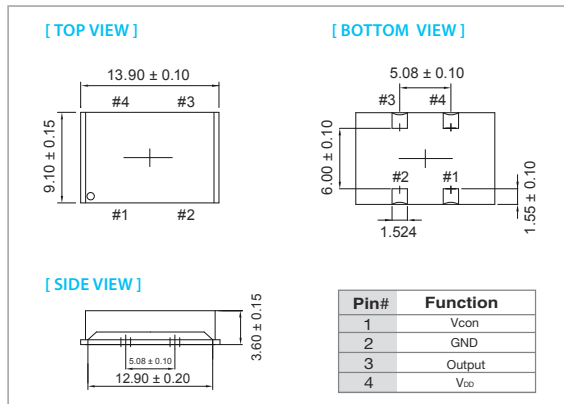
### TYPICAL APPLICATION

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

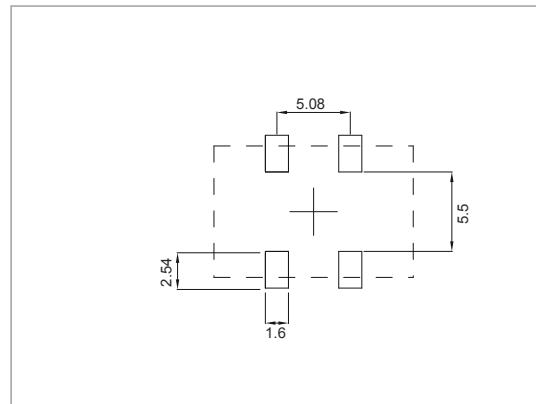


RoHS Compliant

### DIMENSION (mm)



### SOLDER PAD LAYOUT (mm)



### ELECTRICAL SPECIFICATION OUTPUT (PIN = "R.F. OUTPUT")

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

Note: not all combination of options are available. Other specifications may be available upon request.

Specifications subject to change without notice.

### ELECTRICAL FREQUENCY ADJUSTMENT (PIN = “VCO INPUT”)

Parameter	Min.	Typ.	Max.	Unit	Test Condition
<b>Pulling Range</b>	±30			ppm	
<b>Control Voltage</b>	0		+5.0	V	
<b>Slope</b>	Positive				
<b>Center Voltage</b>		+2.5		V	
<b>Linearity</b>	-10		+10	%	
<b>Modulation Bandwidth</b>	1			KHz	
<b>VC Input Impedance</b>	100			Mohm	

### INPUT POWER (PIN = “+VDC”)

Parameter	Min.	Typ.	Max.	Unit	Test Condition
<b>Voltage</b>	+4.75	+5	+5.25	V	
<b>Current</b>			30	mA	At maximum supply voltage

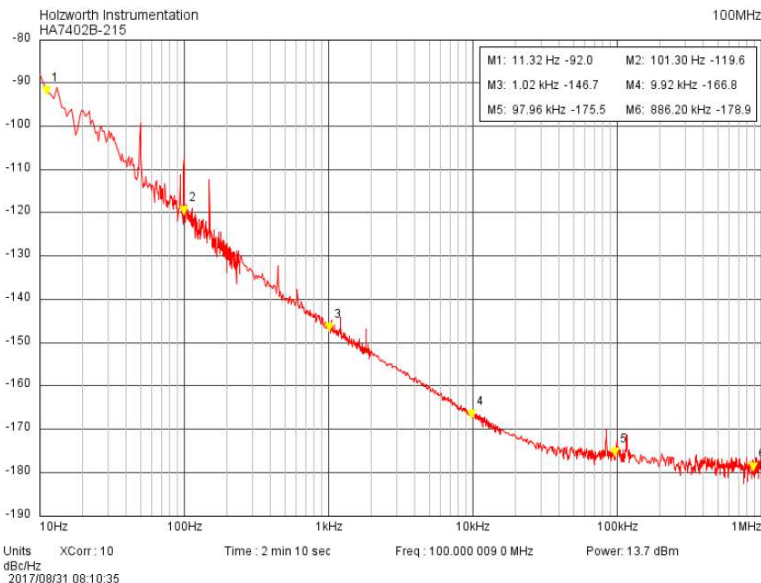
### ENVIRONMENTAL

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

### ORDERING INFORMATION

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

### PHASE NOISE TEST DATA



**Note: not all combination of options are available. Other specifications may be available upon request.**