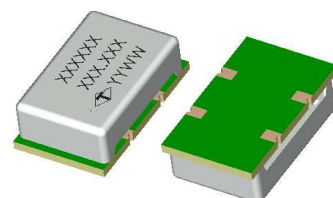


High Frequency Very Low Noise/Low g-Sensitivity VCXO

VLEU-Type series

VLEU-Type Series in 14 x 9mm SMD package

VLEU-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

RoHS Compliant Standard

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

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	CMOS				
1.6.	Duty Cycle	45		55	%	
1.7.	Rise / Fall Time			3	nSec	(20%VDD ~ 80%VDD)
1.8.	Level			0.5	V	
					V	
1.9.	Load		15		pF	
1.10.	Phase Noise (100MHz) (Max.)					
1.10.1.				-80	dBc/Hz	@ 10Hz
1.10.2.				-115	dBc/Hz	@ 100Hz
1.10.3.				-140	dBc/Hz	@ 1KHz
1.10.4.				-160	dBc/Hz	@ 10KHz
1.10.5.				-168	dBc/Hz	@ 100KHz
1.10.6.				-170	dBc/Hz	@ 1MHz

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

	Parameter	Min.	Typ.	Max.	Unit	Test Condition
2.1.	Pulling Range	+/-25			ppm	
2.2.	Control Voltage	0		+3.3	V	
2.3.	Slope	Positive				
2.4.	Center Voltage		+1.65		V	
2.5.	Linearity	-10		+10	%	
2.6.	Modulation Bandwidth	1			KHz	
2.7.	VC Input Impedance	100			Kohm	

3. INPUT POWER (PIN = "VDD")

	Parameter	Min.	Typ.	Max.	Unit	Test Condition
3.1.	Voltage	+3.135	+3.3	+3.465	V	
3.2.	Current			30	mA	At maximum supply voltage

4. ENVIRONMENTAL

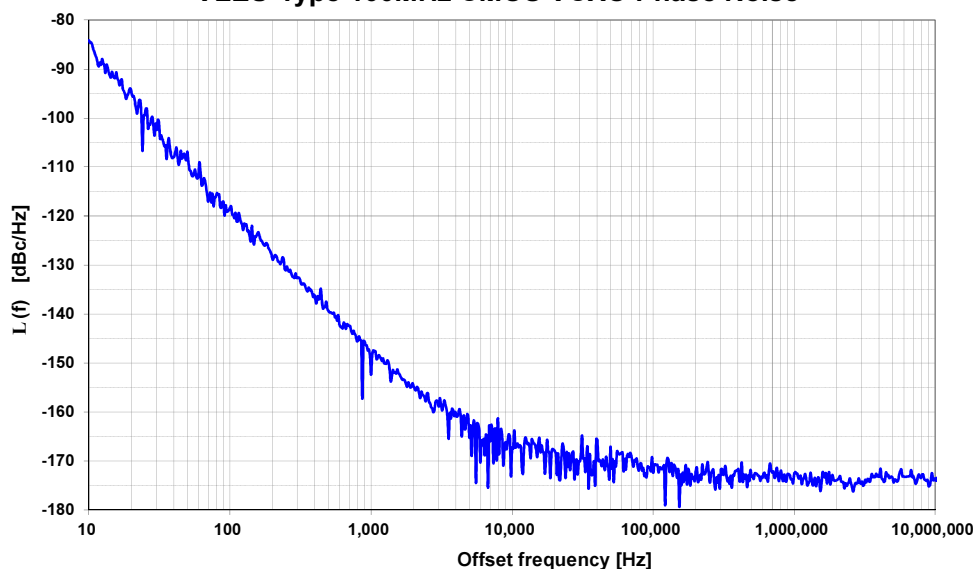
	Parameter	Reference Std.	Test Condition
4.1.	Vibration Test	DIN EN 60068-2-6	10~55Hz, 0.75mm Peak; 55~2000Hz, 10g Peak. 10 Cycles; 3 axis; 1Oct./min.
4.2.	Thermal Shock	DIN EN 60068-2-14	30 min. @each temperature 10 cycles, Transfer<1min.; -40°C +/-3°C; 85°C +/-3°C
4.3.	Mechanical Shock	DIN EN 60068-2-27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

Table 1 : ORDERING INFORMATION

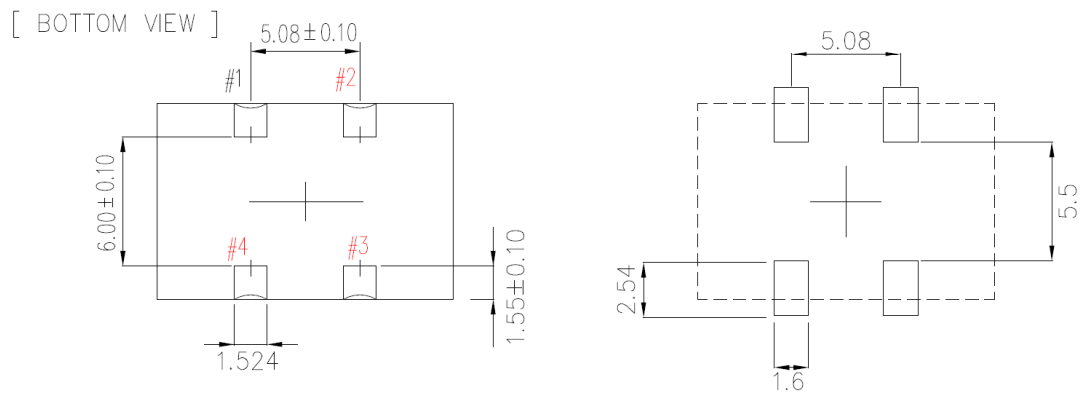
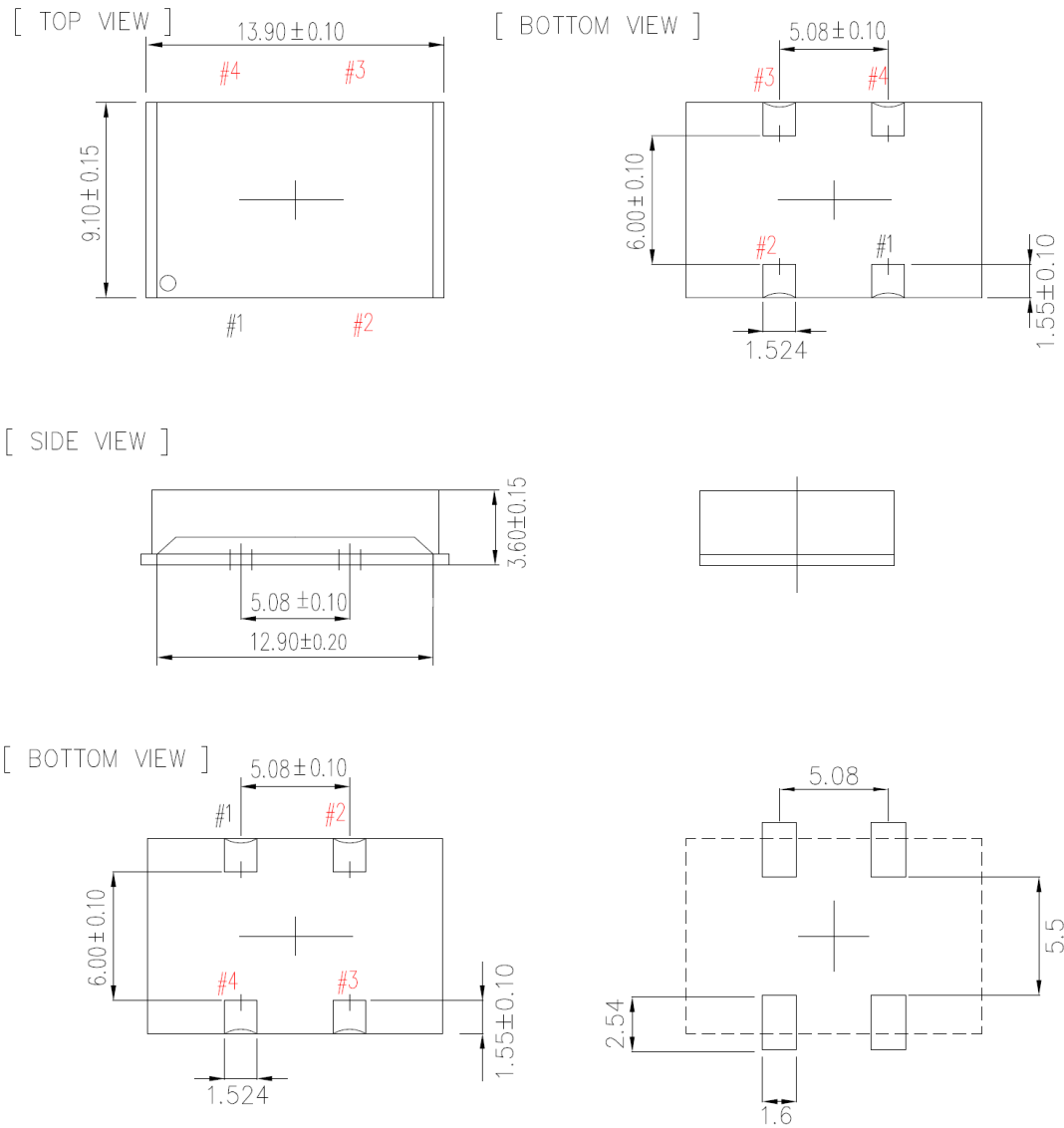
-20°C ~ +70°C	VLEUWCJT NF-Frequency
-40°C ~ +85°C	VLEUWLJT NF-Frequency

PHASE NOISE TEST DATA

VLEU-Type 100MHz CMOS VCXO Phase Noise



OUTLINE DRAWING



Recommended Soldering Pattern

Pin FUNCTIONS

Pin	Function
#1	Vcon
#2	GND
#3	Output
#4	VDD