

# Crystal Oscillator

## NV13M09WS / NV13M09WT Voltage Controlled Crystal Oscillator (VCXO)

### Main Application

Personal Radio Base Station, 5G Base Station and Audio

### Features

- Low Phase Noise  
(Typ. -144dBc/Hz, Typ. -169dBc/Hz@1MHz)
- Low Jitter Performance : Typ. 25 fsec
- Dimensions : 13.8×9.2mm
- A leadless type



Pb Free

RoHS Compliant  
Directive 2011/65/EU  
Directive (EU) 2015/863

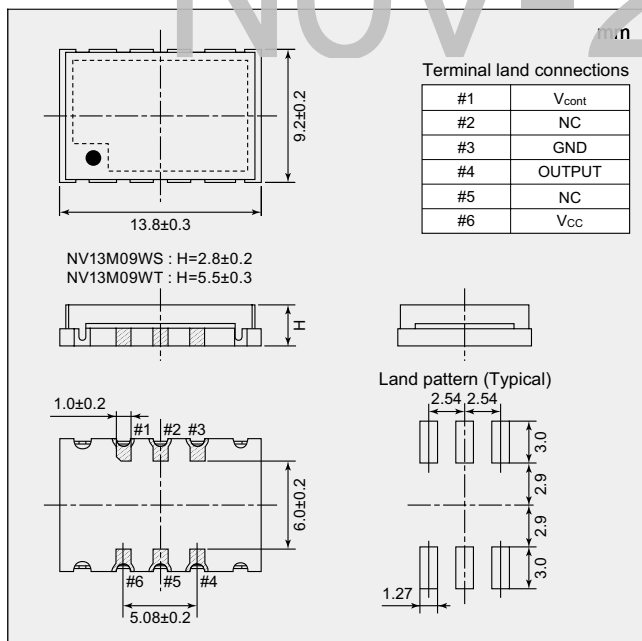
### Specifications

Item	Model	NV13M09WS	NV13M09WT
Nominal Frequency Range (MHz)		100 to 125	100 to 125
Standard Frequency (MHz)		100, 122.88, 125	100, 122.88, 125
Supply Voltage [V <sub>cc</sub> ] (V)		3.3±5%	3.3±5%
Control Voltage [V <sub>cont</sub> ] (V)		0 to 3.3	0 to 3.3
Current Consumption (mA)		Max. 30	Max. 30
Output Specification		CMOS	CMOS
Symmetry (%)		40 to 60	40 to 60
Output Load Condition		15pF	15pF
Operating Temperature Range (°C)		0 to +70      -40 to +85	0 to +70      -40 to +85
Storage Temperature Range (°C)		-40 to +85	-40 to +85
Absolute Pull Range [APR] (*)		Min. ±5×10 <sup>-6</sup>	Min. ±5×10 <sup>-6</sup>
Frequency Change Polarity		Positive	Positive
Phase Jitter (122.88MHz)		Typ. 25 fsec (12kHz to 20MHz)	Typ. 25 fsec (12kHz to 20MHz)

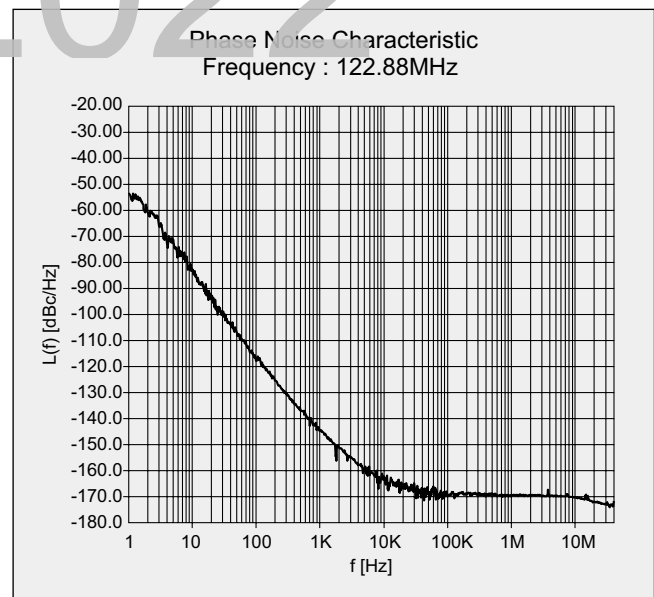
(\*) Absolute Pull Range[APR] is difference value by subtracting Overall Frequency Tolerance from Frequency Pull-ability. (Overall Frequency Tolerance includes "Frequency/Temperature Characteristics", "Frequency Tolerance", "Frequency/Voltage Coefficient", and "Long-term Frequency Stability (5 years)".)

\* Please do not reflow the board upside down after mounting this product. (The product itself or the cover may fall off.)

### Dimensions



### Phase Noise Characteristic



### Specification Number

Model	Operating Temperature Range (°C)	
	0 to +70	-40 to +85
NV13M09WS (H : 2.8mm)	NSC5114A	NSC5114B
NV13M09WT (H : 5.5mm)	NSC5115A	NSC5115B

Please specify the model name, frequency, and specification number when you order products. For further questions regarding specifications, please feel free to contact us.