

## Model Name NV13M09WK Voltage-Controlled Crystal Oscillator (VCXO) NV13M09W Series

### Main Application

For basestation

### Features

- SMD crystal oscillator with a glass epoxy circuit board and a metal lid.
- Frequency range : 10 to 125MHz. (CMOS)
- Fundamental crystal units are designed.
- Enable/Disable function is optional.
- Low power supply voltage(3.3 V)

Pb Free

RoHS Compliant  
Directive 2011/65/EU



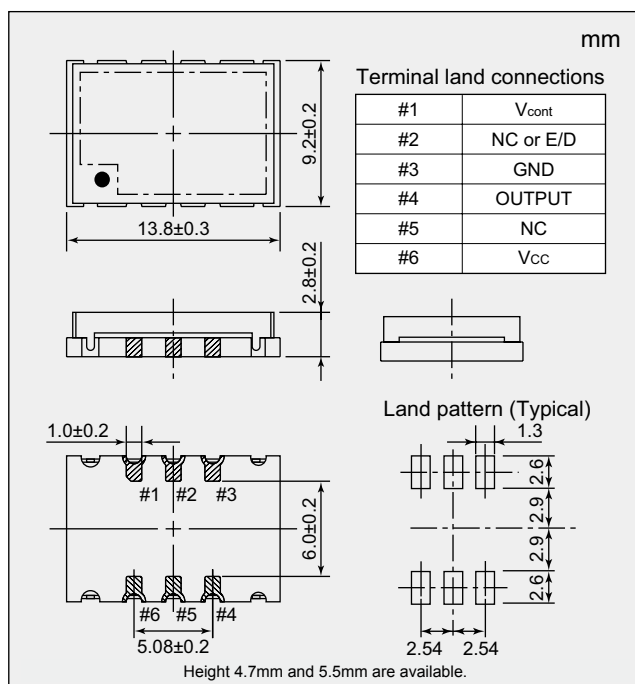
### Specifications

Item	Model	NV13M09WK			
		10 ≤ F < 20	20 ≤ F < 40	40 ≤ F < 60	60 ≤ F ≤ 125
Nominal frequency range (MHz)		10 ≤ F < 20	20 ≤ F < 40	40 ≤ F < 60	60 ≤ F ≤ 125
Supply voltage [V <sub>cc</sub> ] (V)		+3.3V±10%			
Control voltage [V <sub>cont</sub> ] (V)		+1.65±1.5			
Current consumption (mA)		Max. 15	Max. 20	Max. 20	Max. 30
Output voltage		V <sub>OH</sub> : Min. 90% V <sub>CC</sub> , V <sub>OL</sub> : Max. 10% V <sub>CC</sub>			
Symmetry (%)		45 to 55 (at 50%V <sub>CC</sub> )			
Rise time / Decay(fall)time		Max. 7ns (10% to 90%V <sub>CC</sub> )	Max. 7ns (10% to 90%V <sub>CC</sub> )	Max. 7ns (10% to 90%V <sub>CC</sub> )	Max. 5ns (10% to 90%V <sub>CC</sub> )
Output load condition (CMOS)		15pF			
Operating temperature Range (°C)		-40 to +85			
Storage temperature range (°C)		-55 to +125			
Overall frequency tolerance (*1)		Max. ±45×10 <sup>-6</sup>			
Frequency control range		Min. ±100×10 <sup>-6</sup>			
Frequency change polarity		Positive			
Linearity of frequency modulation deviation		Max. 5%			
Input impedance		Min. 100kΩ			

\*Please specify products with or without Enable/Disable function.

(\*1) Overall frequency tolerance includes "Frequency/temperature characteristics", "Frequency tolerance", "Frequency/voltage coefficient", "Frequency/load coefficient" and "Long-term frequency stability(1 year)".

### Dimensions



### List of Enable / Disable function

Input (#2)	Output (#4)
High (V <sub>IH</sub> ≥ 0.7 V <sub>CC</sub> ) or NC	Nominal frequency Output
Low (V <sub>IL</sub> ≤ 0.3V <sub>CC</sub> )	High Z

### List of Ordering Codes

Ordering Code depends on with or without Enable/Disable function.

Frequency (MHz)	Ordering Code	
	Without Enable/Disable function	With Enable/Disable function
19.44	NV13M09WK-19.44M-NSA3528A	NV13M09WK-19.44M-NSA3528E
30.72	NV13M09WK-30.72M-NSA3528B	NV13M09WK-30.72M-NSA3528F
38.88	NV13M09WK-38.88M-NSA3528B	NV13M09WK-38.88M-NSA3528F
40	NV13M09WK-40M-NSA3528C	NV13M09WK-40M-NSA3528G
60	NV13M09WK-60M-NSA3528D	NV13M09WK-60M-NSA3528H
61.44	NV13M09WK-61.44M-NSA3528D	NV13M09WK-61.44M-NSA3528H
77.76	NV13M09WK-77.76M-NSA3528D	NV13M09WK-77.76M-NSA3528H
100	NV13M09WK-100M-NSA3528D	NV13M09WK-100M-NSA3528H
122.88	NV13M09WK-122.88M-NSA3528D	NV13M09WK-122.88M-NSA3528H
125	NV13M09WK-125M-NSA3528D	NV13M09WK-125M-NSA3528H

The above frequencies are NDK's standard frequencies.

Frequencies other than the above are available.

Feel free to contact our sales representatives.