

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



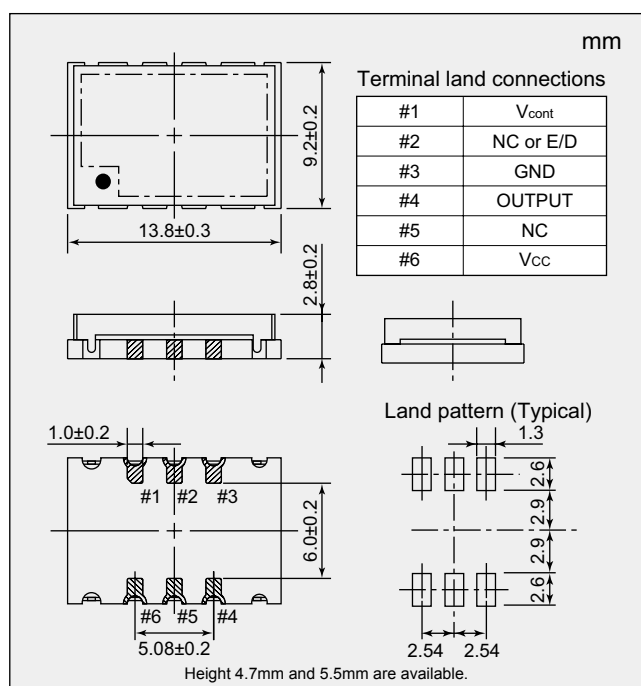
■ Specifications

Item	Model	NV13M09WK			
Nominal frequency range (MHz)		$10 \leq F < 20$	$20 \leq F < 40$	$40 \leq F < 60$	$60 \leq F \leq 125$
Supply voltage [V _{CC}] (V)		+3.3V±10%			
Control voltage [V _{cont}] (V)		+1.65±1.5			
Current consumption (mA)		Max. 15	Max. 20	Max. 20	Max. 30
Output voltage		V _{OH} : Min. 90% V _{CC} , V _{OL} : Max. 10% V _{CC}			
Symmetry (%)		45 to 55 (at 50%V _{CC})			
Rise time / Decay(fall)time		Max. 7ns (10% to 90%V _{CC})	Max. 7ns (10% to 90%V _{CC})	Max. 7ns (10% to 90%V _{CC})	Max. 5ns (10% to 90%V _{CC})
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 ⁻⁶			
Frequency control range		Min. ±100×10 ⁻⁶			
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 _{IH} ≥ 0.7 V _{CC}) or NC	Nominal frequency Output
Low (V _{IL} ≤ 0.3V _{CC})	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.