Crystal Oscillator

NDK Crystal Bridge to the Future

NV13M09WK

Voltage Controlled Crystal Oscillator (VCXO)

■ 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

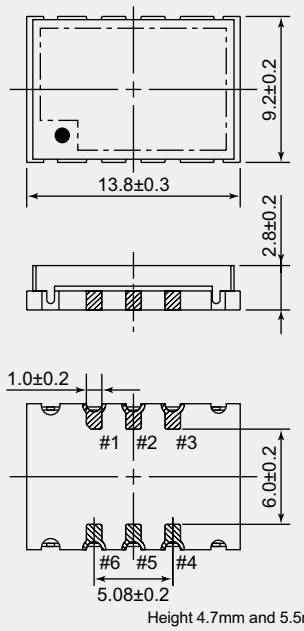
■ Specifications

Item \ Model	NV13M09WK			
Nominal Frequency Range (MHz)	10 ≤ F < 20	20 ≤ F < 40	40 ≤ F < 60	60 ≤ F ≤ 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 (*)	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			

(*) Overall frequency tolerance includes "Frequency/temperature characteristics","Frequency tolerance","Frequency/voltage coefficient","Frequency/load coefficient" and "Long-term frequency stability(1 year)".
* Please specify products with or without Enable/Disable function.
* Please do not reflow the board upside down after mounting this product. (The product itself or the cover may fall off.)

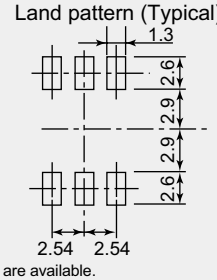
■ Dimensions

mm



Terminal land connections

#1	V_{cont}
#2	NC or E/D
#3	GND
#4	OUTPUT
#5	NC
#6	V_{CC}



Height 4.7mm and 5.5mm are available.

■ 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

■ Specification Number

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

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