Crystal Oscillator NEW

NDK Crystal Bridge to the Future

NV13M09WS / NV13M09WT Voltage Controlled Crystal Oscillator (VCXO)

■ Main Application

Personal Radio Base Station and 5G Base Station

NV13M09WS (H : 2.8mm)

NV13M09WT (H : 5.5mm)

■ 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

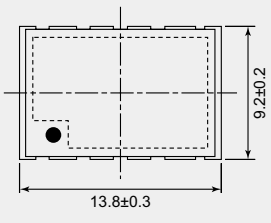
■ Specifications

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_{CC}] (V)	3.3±5%		3.3±5%	
Control Voltage [V_{cont}] (V)	0 to 3.3		0 to 3.3	
Current Consumption (mA)	Max. 30		Max. 30	
Output Voltage	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] (*1)	Min. $\pm5\times10^{-6}$		Min. $\pm5\times10^{-6}$	
Frequency Change Polarity	Positive		Positive	
Phase Jitter (122.88MHz)	Typ. 25 fsec (12kHz to 20MHz)		Typ. 25 fsec (12kHz to 20MHz)	

(*1) 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)".)

■ Dimensions

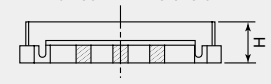
mm

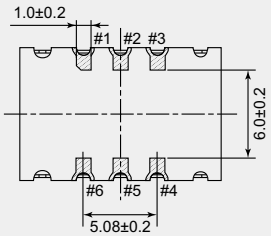


Terminal land connections

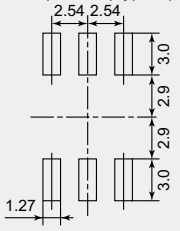
#1	V_{cont}
#2	NC
#3	GND
#4	OUTPUT
#5	NC
#6	V_{CC}

NV13M09WS : H=2.8±0.2
NV13M09WT : H=5.5±0.3

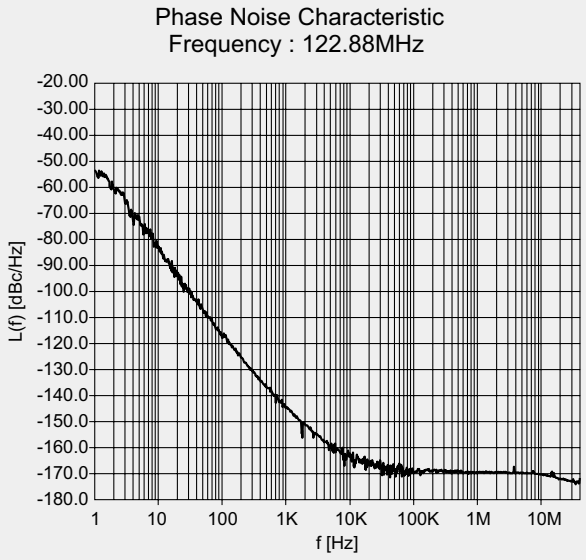




Land pattern (Typical)



■ 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.