



# Crystal Oscillator

## NH14M09TA

High Precision Oscillator (Twin-OCXO)  
for Fixed Communication Equipment

### Main Application

- Base stations for system mobile communications
- Optical transmission system
- Measuring instrument
- Synthesizer
- Exchanger
- High-end router

### Features

- Compact and excellent temperature characteristics.
- Excellent long-term frequency stability.
- Excellent phase noise characteristics.
- Hermetic sealing package for excellent environmental-proof performance.
- Supports wide temperature range (-40 to +85 °C)

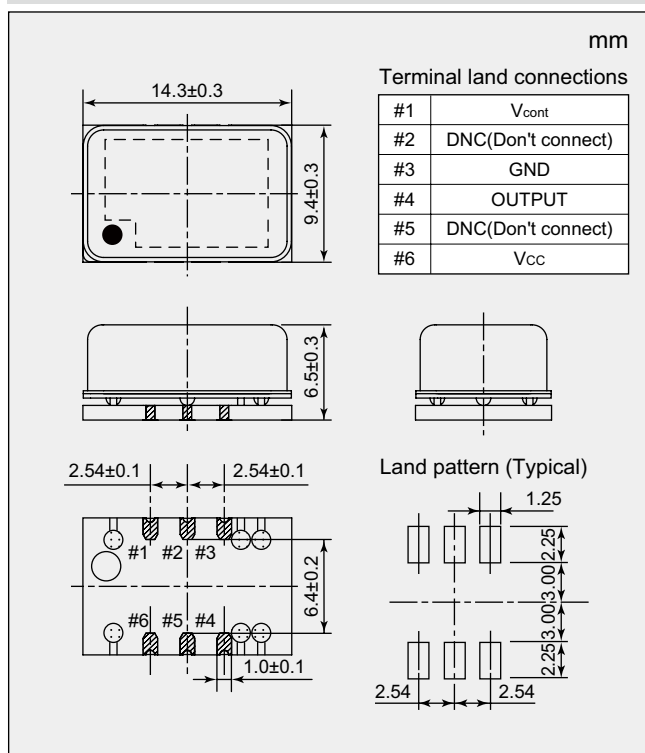
Pb Free  
RoHS Compliant  
Directive 2011/65/EU



### Specifications

Item	Measurement condition	Model	NH14M09TA		
Nominal Frequency Range (MHz)			5 to 40		
Nominal Frequency (MHz)			10, 12.8, 13, 16.384, 19.2, 20, 25, 26, 30.72, 38.4, 38.88, 40		
Supply Voltage [V <sub>CC</sub> ] (V)			+3.3 ±5 %		
Power Consumption (W)	at start		Typ. 1.3 (Max. 2.0)		
	when stable (+25 °C)		Typ. 0.6 (Max. 1.0)		
Output Voltage			LVCMOS (V <sub>OL</sub> Max. 0.3 V, V <sub>OH</sub> Min. 3 V)		
Symmetry (%)	at 1/2 V <sub>CC</sub>		45 to 55		
Load Impedance (pF)			15		
Operating Temperature Range (°C)			-20 to +70	-40 to +85	-40 to +85
Storage Temperature Range (°C)			-40 to +85		
Stabilization Time	Stabilization Time (Frequency Stability) within ±100 ×10 <sup>-9</sup> after power on at +25°C, based on frequency after 60minutes operation.		Max. 3 minutes		
Long-term Frequency Stability	Based on frequency after 30 days operation		Max. ±5×10 <sup>-9</sup> /day		
	Based on frequency after 30 days operation		Max. ±300×10 <sup>-9</sup> /year		
Frequency/Temperature Characteristics			Max. ±10×10 <sup>-9</sup>	Max. ±10×10 <sup>-9</sup>	Max. ±20×10 <sup>-9</sup>
Frequency/Voltage Coefficient	V <sub>CC</sub> +3.3 V ±5 %		Typ. ±5×10 <sup>-9</sup> (Max. ±10×10 <sup>-9</sup> )		
Frequency Control Range	V <sub>cont</sub> +0.2 V to +2.8 V (@ +1.5V)		Min. ±5.0×10 <sup>-6</sup>		
Frequency Change Polarity	Frequency Change Polarity		Positive		
	Linearity		Typ. 1%		
Specification Number			NSA3540F	NSA3540E	NSC5070A

### Dimensions



### Reference Value

Phase Noise (at 10 MHz)	Offset Frequency	dBc/Hz
	1 Hz	-75
	10 Hz	-100
	100 Hz	-125
	1 kHz	-150
	10 kHz	-160

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