Crystal Oscillator

Model Name NH14M09WA

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.
- Excellent temperature characteristics.
- Excellent Long-term frequency stability.
- Excellent phase noise characteristics.
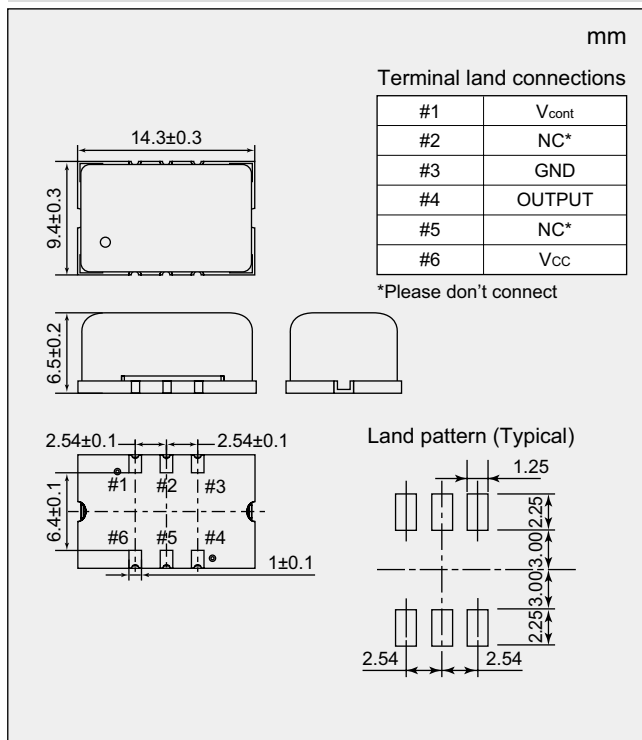- Supports wide temperature range.(-40 to +85°C)

Pb Free

RoHS Compliant
Directive 2011/65/EU

■ Specifications

Item \ Model Measurement condition		NH14M09WA
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_{CC}] (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_{OL} Max. 0.3 V, V_{OH} Min. 3 V)
Symmetry (%)	at 1/2 V_{CC}	45 to 55
Load impedance (pF)		15
Operating temperature range (°C)		Refer to *1
Storage temperature range (°C)		−40 to +85
Stabilization time	Stabilization Time (Frequency Stability) within ±100 ×10^{-9} 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^{-9}/day
	Based on frequency after 30 days operation	Max. ±200×10^{-9}/year
Frequency/Temperature characteristics		Refer to *1
Frequency/Voltage coefficient	V_{CC} +3.3 V ±5 %	Typ. ±5×10^{-9} (Max. ±10×10^{-9})
Frequency control range	V_{cont} +0.2 V to +2.8 V (@ +1.5V)	Min. ±5.0×10^{-6}
Frequency change polarity	Frequency change polarity	Positive
	Linearity	Typ. 1%

■ Dimensions

mm

14.3±0.3

9.4±0.3

6.5±0.2

2.54±0.1   2.54±0.1

6.4±0.1

#1 #2 #3
#6 #5 #4

1±0.1

Terminal land connections

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

*Please don't connect

Land pattern (Typical)

1.25

2.25
3.00
2.25

2.54   2.54

■ 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

The value of phase noise changes when the frequency changes.

■ *1 List of Options

Operating temperature range (°C)	−20 to +70
Frequency/temperature characteristics	Max. ±10×10^{-9}
Ordering Code	NH14M09WA-[ ]-NSA3540A

Operating temperature range (°C)	−20 to +70
Frequency/temperature characteristics	Max. ±50×10^{-9}
Ordering Code	NH14M09WA-[ ]-NSA3540B

Operating temperature range (°C)	−40 to +85
Frequency/temperature characteristics	Max. ±20×10^{-9}
Ordering Code	NH14M09WA-[ ]-NSA3540C

Operating temperature range (°C)	−40 to +85
Frequency/temperature characteristics	Max. ±50×10^{-9}
Ordering Code	NH14M09WA-[ ]-NSA3540D

Please specify a NDK's nominal frequency in the square brackets.
(Example 10MHz : Please specify 10M in the square brackets.)
Frequencies other than the above are available.
Feel free to contact our sales representatives.

NIHON DEMPA KOGYO CO., LTD.

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