Crystal Oscillator

NDK
Crystal Bridge to the Future

Model Name NH25M22WC

Oven-Controlled Crystal Oscillator (OCXO)
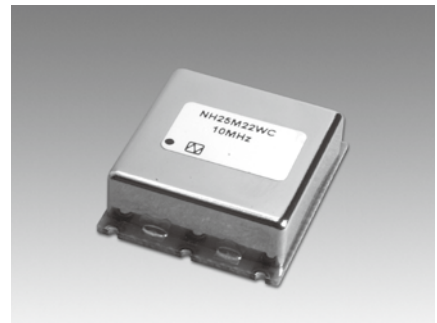for Fixed Communication Equipment

■ Main Application

- Mobile communication base station
- Exchanger
- Measuring instrument
- Synthesizer
- High-end router

■ Features

- Compact, with a low height.
- A surface-mount (SMD) package. Reflow soldering is possible.
- Excellent phase noise characteristics. (-135dBc/Hz at 1kHz)
- Excellent long-term frequency stability.($\pm 100 \times 10^{-9}$/year)

RoHS Compliant
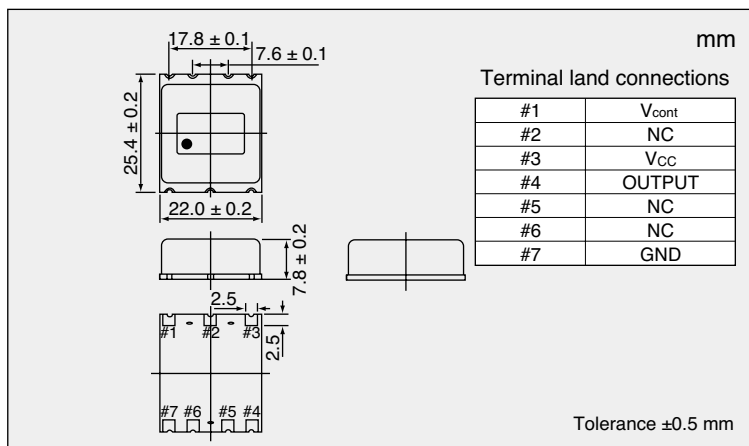Directive 2011/65/EU

■ Specifications

Item / Measurement condition		Model NH25M22WC
Nominal frequency (MHz)		10
Supply voltage [V_{CC}] (V)		+5 ±5 %
Power consumption (W)	at start	Max. 3
	when stable (+25 °C)	Max. 2
Output voltage		HCMOS level (V_{OL} Max. 0.5 V, V_{OH} Min. 4.5 V)
Symmetry (%)	at 1/2 V_{CC}	40 to 60
Load impedance (pF)		15
Operating temperature range (°C)		−10 to +70
Storage temperature range (°C)		−40 to +85
Stabilization time	Stabilization Time (Frequency Stability) within $\pm 200 \times 10^{-9}$ after power on at +25°C , based on frequency after 60minutes operation.	Max. 5 minutes
Long-term frequency stability	Based on frequency after 30 days operation	Max. $\pm 2 \times 10^{-9}$/day
	Based on frequency after 30 days operation	Max. $\pm 100 \times 10^{-9}$/year
Frequency/Temperature characteristics	−10 to +70 °C	Max. $\pm 20 \times 10^{-9}$
Frequency/Voltage coefficient	V_{CC} +5V ± 5 %	Max. $\pm 10 \times 10^{-9}$
Frequency control range	V_{cont} +2.5 ± 2.5 V	Min. $\pm 1 \times 10^{-6}$
Frequency change polarity		Positive

■ Reference Value

	Offset frequency	dBc/Hz
Phase noise (at 10 MHz)	1 Hz	−70
	10 Hz	−100
	100 Hz	−120
	1 kHz	−135
	10 kHz	−135

The value of phase noise changes when the frequency changes.

■ Dimensions

mm

17.8 ± 0.1
7.6 ± 0.1
25.4 ± 0.2
22.0 ± 0.2
7.8 ± 0.2
2.5
2.5

#1 #2 #3
#7 #6 #5 #4

Terminal land connections

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

Tolerance ±0.5 mm

■ List of Options

Power supply voltage [V_{CC}] (V)	+3.3
Nominal frequency range (MHz)	10 to 20

For details of options, please feel free to contact our sales representatives.

■ List of Ordering Codes

Nominal frequency (MHz)	Ordering Code
10	NH25M22WC-10M-NSA3419A

The above frequencies are NDK's standard frequencies. Frequencies other than the above are available. Feel free to contact our sales representatives.