Crystal Oscillator

NDK
Crystal Bridge to the Future

Model Name NH25M22WA Oven-Controlled Crystal Oscillator (OCXO) for Fixed Communication Equipment

■ Main Application

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

■ Features

- Compact.
- A surface-mount (SMD) package.
- Reflow soldering is possible.
- Excellent phase noise characteristics.
- Excellent aging characteristics.
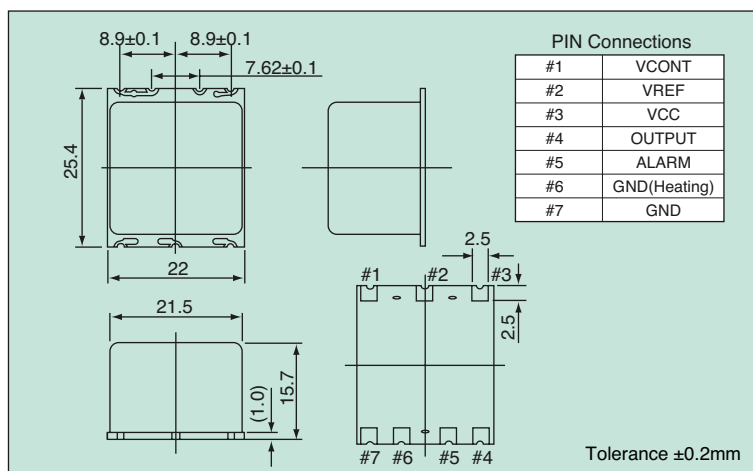
RoHS Compliant
Directive 2002/95/EC

■ Specifications

Item / Measurement condition		Model NH25M22WA
Standard nominal frequency (MHz)		32.768
Power supply voltage		DC +3.3V
Power consumption		3.0 W max. at the start and 1.3 W max. when stable (+25℃)
Output level		HCMOS (V_{OL} : 0.4V max., V_{OH} : 2.4V min.)
Load		10kΩ//15pF
Duty Cycle (1/2Vcc)		45 to 55%
Operating temperature range		−10 to +70℃
Aging	Based on frequency after 30 days operation	$\pm2\times10^{-9}$/day max.
	Based on frequency after 30 days operation	$\pm50\times10^{-9}$/year max.
Frequency / temperature characteristic	−10 to +70℃	$\pm20\times10^{-9}$ max.
Power supply variation characteristics	DC +3.3V±5%	$\pm3\times10^{-9}$ max.
Frequency control characteristic	0 to +2.8 V, positive polarity	$\pm0.9\times10^{-6}$ min.

(Frequency stability applies to the Aging through Power supply variation characteristics rows.)

■ Reference Value

	Offset frequency	dBc/Hz
Phase noise (@32.768MHz)	1 Hz	−65 max.
	10 Hz	−95 max.
	100 Hz	−115 max.
	1k Hz	−125 max.
	10k Hz	−140 max.

The value of phase noise changes when the frequency changes.

■ Dimensions

8.9±0.1 8.9±0.1
7.62±0.1
25.4
22
21.5
15.7
(1.0)
2.5
2.5
Tolerance ±0.2mm

PIN Connections

#1	VCONT
#2	VREF
#3	VCC
#4	OUTPUT
#5	ALARM
#6	GND(Heating)
#7	GND

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

■ List of Options

Power supply voltage	DC +5V
Nominal frequency (MHz)	10 to 40

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

■ List of Ordering Codes

Frequency (MHz)	Ordering Code
32.768	NH25M22WA-32.768M-NSA3425A

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

NIHON DEMPA KOGYO CO.,LTD.