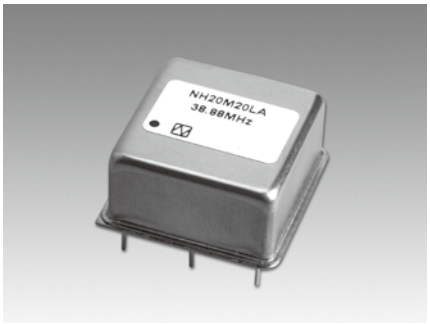
Crystal Oscillator

Model Name NH20M20LA

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.
- Excellent rise characteristics.
- Excellent phase noise characteristics.
  (38.88MHz : -135dBc/Hz at 1kHz)

RoHS Compliant
Directive 2011/65/EU

■ Specifications

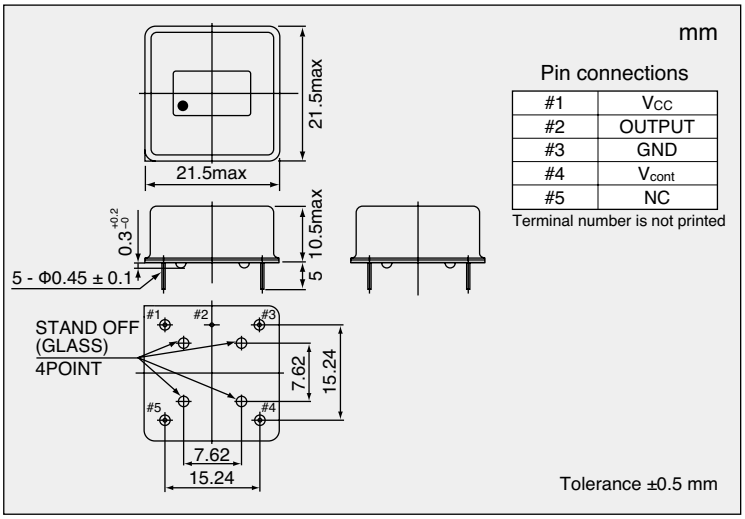
Item / Measurement condition / Model		NH20M20LA
Nominal frequency (MHz)		10, 38.88
Supply voltage [V_{CC}] (V)		+5 ±5 %
Power consumption (W)	at start	Max. 3
	when stable (+25 °C)	Max. 1.5
Output voltage		HCMOS level (V_{OL} Max. 0.5 V, V_{OH} Min. 4.5 V)
Symmetry (%)	at 1/2 V_{CC}	40 to 60
Load impedance (pF)		15
Operating temperature range (°C)		−10 to +70
Storage temperature range (°C)		−40 to +85
Stabilization time	Stabilization Time (Frequency Stability) within ±500 ×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. ±10×10^{-9}/day
	Based on frequency after 30 days operation	Max. ±500×10^{-9}/year
Frequency/Temperature characteristics	−10 to +70 °C	Max. ±200×10^{-9}
Frequency/Voltage coefficient	V_{CC} +5V ± 5 %	Max. ±50×10^{-9}
Frequency control range	V_{cont} +2.5 ± 2.5 V	Min. ±5×10^{-6}
Frequency change polarity		Positive

■ Reference Value

	Offset frequency	dBc/Hz
Phase noise (at 38.88 MHz)	1 Hz	−60
	10 Hz	−90
	100 Hz	−115
	1 kHz	−135
	10 kHz	−145

The value of phase noise changes when the frequency changes.

■ Dimensions



Pin connections

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

Terminal number is not printed

■ List of Options

Operating temperature range (°C)	−30 to +70
Power supply voltage [V_{CC}] (V)	+3.3
Nominal frequency range (MHz)	10 to 38.88

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

■ List of Ordering Codes

Nominal frequency (MHz)	Ordering Code
10	NH20M20LA-10M-NSA3421A
38.88	NH20M20LA-38.88M-NSA3421A

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