

Crystal Oscillator

Model Name NH20M20LA

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

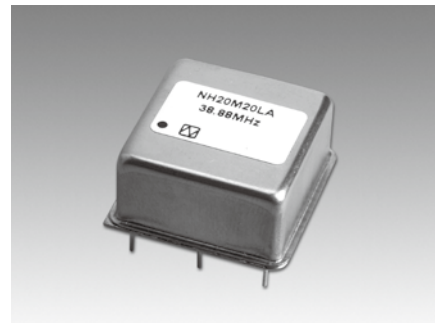
Main Application

- 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 2002/95/EC



Specifications

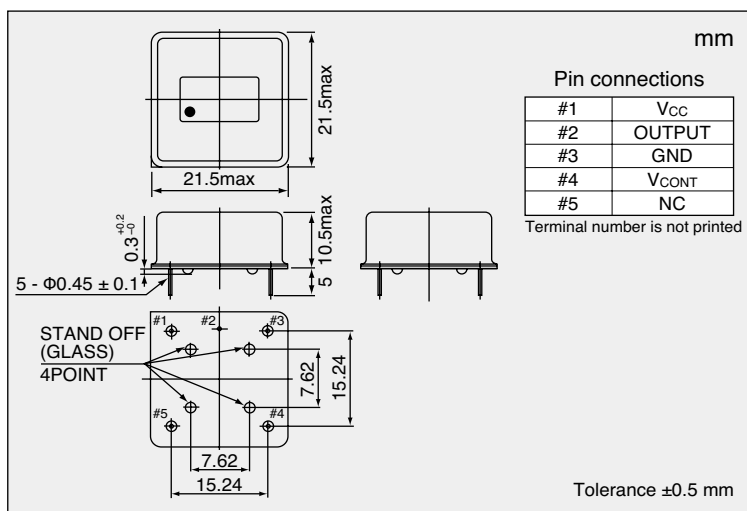
Item	Measurement condition	Model	NH20M20LA
Nominal frequency (MHz)			10, 38.88
Supply voltage [V _{CC}] (V)			+5 ±5 %
Power consumption (W)	at start		Max. 3
	when stable (+25 °C)		Max. 1.5
Output voltage			HCMOS level (V _{OL} Max. 0.5 V, V _{OH} Min. 4.5 V)
Symmetry (%)	at 1/2 V _{CC}		40 to 60
Load 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.		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 °C to +70 °C		Max. ±200×10 ⁻⁹
Frequency/Voltage coefficient	V _{CC} +5 V ±5 %		Max. ±50×10 ⁻⁹
Frequency control range	+2.5 ±2.5 V		Min. ±5×10 ⁻⁶
Frequency change polarity			Positive

Reference Value

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

The value of phase noise changes when the frequency changes.

Dimensions



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

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.