

# Crystal Oscillator

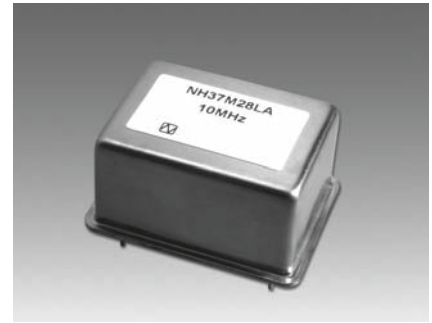
## Model Name NH37M28LA Oven-Controlled Crystal Oscillator (OCXO) for Fixed Communication Equipment

### Main Application

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

### Features

- Compact.
- Excellent rise characteristics.
- Excellent phase noise characteristics.
- Excellent aging characteristics.



**RoHS Compliant**  
Directive 2002/95/EC

### Specifications

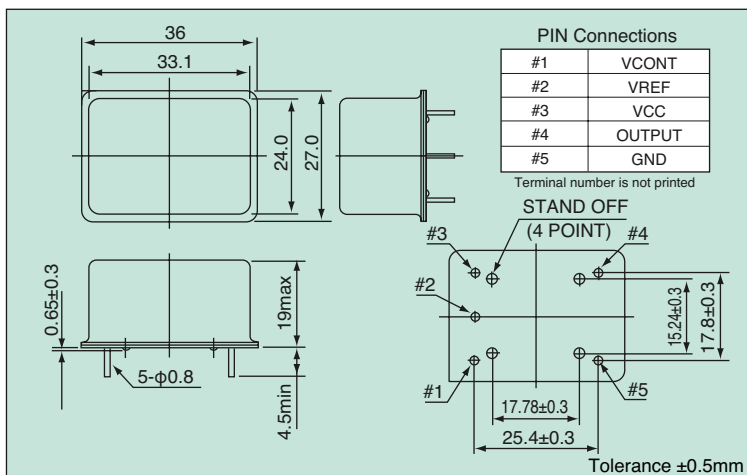
Item	Measurement condition	Model	NH37M28LA
Standard nominal frequency (MHz)			10
Power supply voltage			DC +5V
Power consumption			3 W max. at the start and 1.3 W max. when stable (+25°C)
Output level			HCMOS ( $V_{OL}$ : 0.5V max., $V_{OH}$ : 4.5V min.)
Load			15pF
Duty Cycle (1/2V <sub>cc</sub> )			40 to 60%
Operating temperature range			-10 to +70°C
Frequency stability	Frequency warm-up characteristic	+25°C five minutes after power is on	$\pm 50 \times 10^{-9}$ max.
	Aging	Based on frequency after 72 hours operation	$\pm 2 \times 10^{-9}$ /day max.
		Based on frequency after 72 hours operation	$\pm 50 \times 10^{-9}$ /year max.
	Frequency / temperature characteristic	-10 to +70°C	$\pm 10 \times 10^{-9}$ max.
	Power supply variation characteristics	DC +5V $\pm$ 5%	$\pm 3 \times 10^{-9}$ max.
Frequency control characteristic	0 to +4 V, positive polarity		$\pm 1 \times 10^{-6}$ min.

### Reference Value

Phase noise (@10MHz)	Offset frequency	dBc/Hz
	1 Hz	-85 max.
	10 Hz	-120 max.
	100 Hz	-140 max.
	1k Hz	-145 max.
	10k Hz	-150 max.

The value of phase noise changes when the frequency changes.

### Dimensions



### List of Options

Operating temperature range	-40 to +70°C
Power supply voltage	DC +3.3V
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
10	NH37M28LA-10M-NSA3427A

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