

## Model Name NT3225SA

Temperature-Compensated Crystal Oscillator with AFC Function (VC-TCXO) NT3225S Series

### ■ Main Application

For mobile phones, etc.

### ■ Features

- Supports low power supply voltage. (Supports DC +2.4 V $\pm$ 0.1 V to +3.4 V $\pm$ 5 %.)
- Ultra-compact and light with a height, cubic volume, and weight of Max. 1.0 mm, 0.007 cm<sup>3</sup>, and 0.024g, respectively.
- With an AFC (Automatic Frequency Control) function.
- Low power consumption.
- A surface-mount crystal oscillator. (Reflow soldering is possible.)
- Lead-free. Meets the requirements for re-flow profiling using lead-free solder.



Pb  
Free

RoHS Compliant  
Directive 2002/95/EC

### ■ Specifications

Item	Model	NT3225SA
Standard nominal frequency (MHz)		10 to 26
Supply voltage [VCC] (V)		+3.0
Load		10 k $\Omega$ /10 pF
Current consumption (mA)		Max. 1.5
Output voltage		Min. 0.8 V(P-P) (DC Coupling *1)
Frequency stability		Max. $\pm 2.5 \times 10^{-6}$
Operating temperature range (°C)		-30 to +75
Supply variation		Max. $\pm 0.3 \times 10^{-6}$ / +3.0 V $\pm$ 5 %
Load variation		Max. $\pm 0.2 \times 10^{-6}$ / (10 k $\Omega$ /10 pF) $\pm 10$ %
Aging		Max. $\pm 1.0 \times 10^{-6}$ / year
AFC characteristic		$\pm 9.0 \times 10^{-6}$ to $\pm 15.0 \times 10^{-6}$ / +1.5 V $\pm 1$ V *2

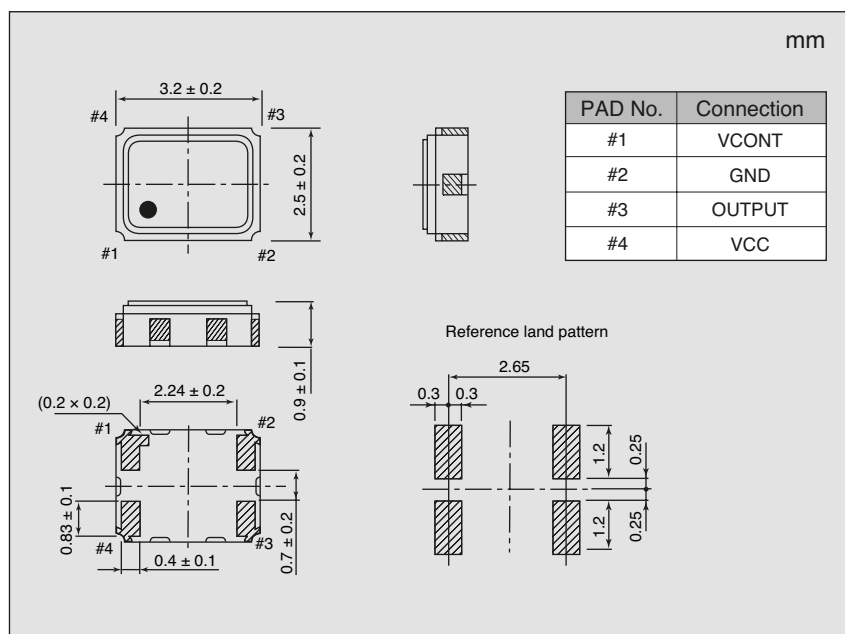
#### • Frequency setting conditions

1. Frequencies are set at normal temperatures (+25 $\pm$ 2 °C).
  2. Frequencies are set with a printed board that has a ground pattern attached to the underside of an oscillator.
- If you require a product with a different frequency, power supply voltage, frequency control characteristic, etc. to the standard specifications, please contact us with your enquiries.

\*1. A DC-cut capacitor is not embedded in this crystal oscillator. Connect a DC-cut capacitor (1,000 pF) to the line-out terminal of the oscillator.

\*2. This is a representative specification. The specifications may change according to the frequency that you request.

### ■ Dimensions



### ■ List of Ordering Codes

Frequency (MHz)	Ordering Code
10	NT3225SA-10M-NSA3391C
12.8	NT3225SA-12.8M-NSA3391C
13	NT3225SA-13M-NSA3391C
15.36	NT3225SA-15.36M-NSA3391C
16.368	NT3225SA-16.368M-NSA3391C
19.2	NT3225SA-19.2M-NSA3391A
19.68	NT3225SA-19.68M-NSA3391A
19.8	NT3225SA-19.8M-NSA3391A
21.25	NT3225SA-21.25M-NSA3391A
26	NT3225SA-26M-NSA3391A

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