

Model Name NT3225SA Temperature-Compensated Crystal Oscillator (TCXO) NT3225S Series (with high-precision GPS supported)

■ Main Application

For mobile terminals with high-precision GPS functions

■ Features

- A crystal oscillator with highly stable frequency / temperature characteristics best suited for GPS.
- Supports low power supply voltage. (Supports DC +2.4 V $\pm$ 0.1 V to +3.5 V $\pm$ 5 %.)
- Ultra-compact and light with a height, cubic volume, and weight of Max. 1.0 mm, 0.007 cm³, and 0.024 g, respectively.
- 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)		16.367 to 27.456
Supply voltage [VCC] (V)		+2.8
Load		10 k Ω /10 pF
Current consumption (mA)		Max. 1.5
Output voltage		Min. 0.8 V(P-P) (DC Coupling *1)
Frequency stability		Max. $\pm 0.5 \times 10^{-6}$
Operating temperature range (°C)		-30 to +85
Supply variation		Max. $\pm 0.2 \times 10^{-6}$ / +2.8 V $\pm$ 5 %
Load variation		Max. $\pm 0.2 \times 10^{-6}$ / (10 k Ω /10 pF) ± 10 %
Aging		Max. $\pm 1.0 \times 10^{-6}$ / year

• Frequency setting conditions

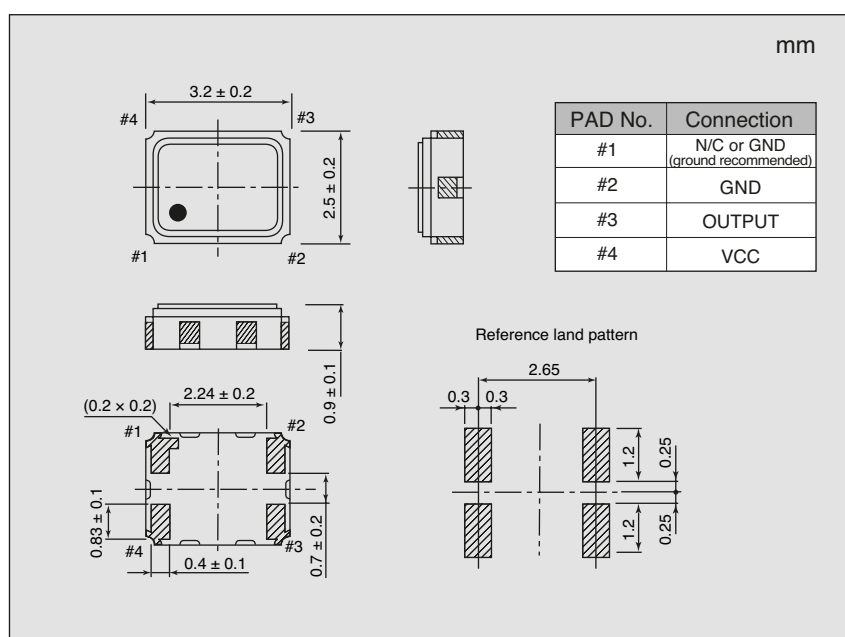
1. Frequencies are set at normal temperatures (+25 $\pm$ 2 °C).
2. Frequencies are set with a printed board that has a ground pattern attached to the underside of an oscillator.
3. Connect the #1 terminal of the oscillator to the ground that comes with the oscillator.

• 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.

• Products with the AFC (Automatic Frequency Control) function are available. If you require such a product, please contact us.

*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.

■ Dimensions



■ List of Ordering Codes

Frequency (MHz)	Ordering Code
16.367	NT3225SA-16.367M-NSA3401B
16.3676	NT3225SA-16.3676M-NSA3401B
16.368	NT3225SA-16.368M-NSA3401B
16.369	NT3225SA-16.369M-NSA3401B
16.8	NT3225SA-16.8M-NSA3401B
23.104	NT3225SA-23.104M-NSA3401B
24.5535	NT3225SA-24.5535M-NSA3401B
26	NT3225SA-26M-NSA3401B
27.456	NT3225SA-27.456M-NSA3401B

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