

# Crystal Oscillator

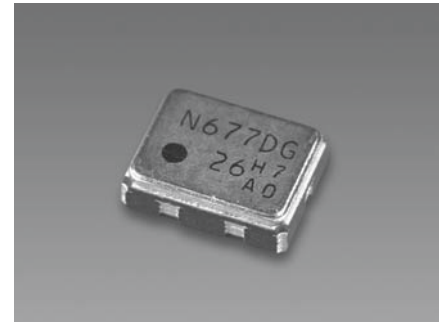
## Model Name NT3225SA Temperature-Compensated Crystal Oscillator with AFC Function (VC-TCXO) NT3225S Series

### Main Application

For mobile phones, etc.

### Features

- Supports low power supply voltage. (Supports DC +2.4±0.1 V to +3.4 V±5%.)
- Ultra-compact and light with a height, cubic volume, and weight of 1.0 mm max., 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 MHz
Power supply voltage		+3.0V DC
Load		10kΩ//10pF
Consumption current		1.5mA max
Output level		0.8V(P-P) min (DC superimposition *1)
Frequency / temperature characteristic		±2.5×10 <sup>-6</sup> max
		-30 to +75°C
Power supply variation characteristics		±0.3×10 <sup>-6</sup> max/+3.0V±5%
Load variation characteristics		±0.2×10 <sup>-6</sup> max/(10kΩ//10pF)±10%
Aging		±1.0×10 <sup>-6</sup> max/year
Frequency control characteristics		±9.0×10 <sup>-6</sup> to ±15.0×10 <sup>-6</sup> +1.5V±1V *2

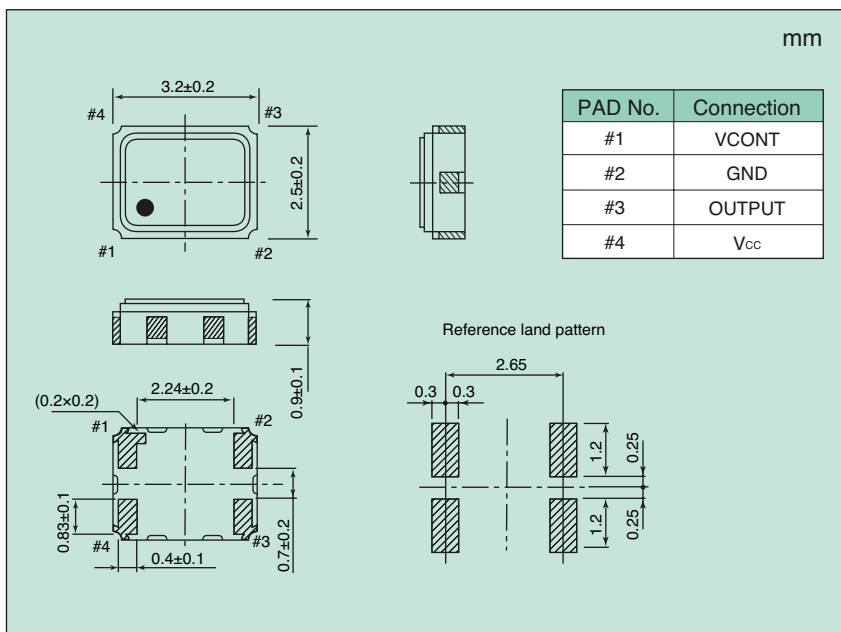
#### Frequency setting conditions

1. Frequencies are set at normal temperatures (+25±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.