

# Crystal Oscillator

## NT3225SA

Temperature Compensated Crystal Oscillator  
with AFC function(VC-TCXO)

### Main Application

Smartphone / Mobile phone, Wireless module, and GPS / GNSS module, etc.

### Features

- Supports low power supply voltage. (Supports DC +1.7 V to +3.3 V)
- 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 2011/65/EU

### Specifications

Item	Model	NT3225SA	
Nominal Frequency Range (MHz)		10 to 40	
Standard Frequency (MHz)		10, 12, 12.288, 12.8, 13, 14.4, 14.7456, 15, 15.36, 16, 16.368, 16.369, 16.384, 16.8, 18, 19.2, 19.44, 19.68, 20, 21.25, 22.4, 24, 24.576, 25, 26	38.4, 40
Supply Voltage [V <sub>cc</sub> ] (V)		+3.0	
Load Impedance		10 kΩ//10 pF	
Current Consumption (mA)		Max. 1.5	Max. 1.7
Output Voltage		Min. 0.8 V(p-p) (DC Coupling *1)	
Frequency/Temperature Characteristics		Max. ±2.5×10 <sup>-6</sup>	
Operating Temperature Range (°C)		-30 to +75	
Storage Temperature Range (°C)		-40 to +85	
Frequency/Voltage Coefficient		Max. ±0.3×10 <sup>-6</sup> /+3.0 V±5 %	
Frequency/Load Coefficient		Max. ±0.2×10 <sup>-6</sup> /(10 kΩ//10 pF) ±10 %	
Long-term Frequency Stability		Max. ±1.0×10 <sup>-6</sup> /year	
Frequency Control Range		±9.0×10 <sup>-6</sup> to ±15.0×10 <sup>-6</sup> /+1.5 V±1 V	

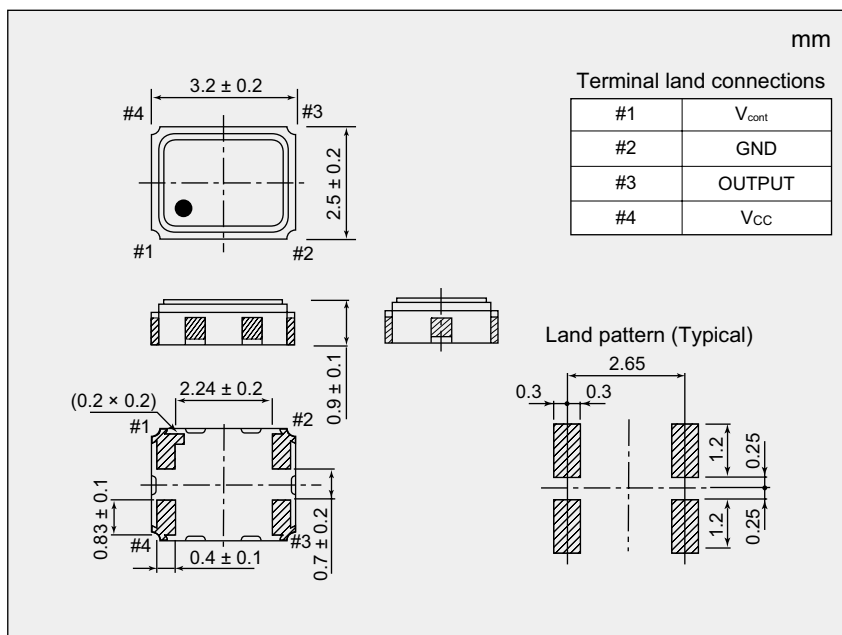
\* Frequency setting conditions : Frequencies are set at normal temperatures (+25±2 °C).

\*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.

### Specification Number

Frequency (MHz)	Specification Number
10	NSA3630A
12	NSA3630A
12.288	NSA3630A
12.8	NSA3630A
13	NSA3630A
14.4	NSA3630A
14.7456	NSA3630A
15	NSA3630A
15.36	NSA3630A
16	NSA3630A
16.368	NSA3630A
16.369	NSA3630A
16.384	NSA3630A
16.8	NSA3630A
18	NSA3630A
19.2	NSA3630A
19.44	NSA3630A
19.68	NSA3630A
20	NSA3630A
21.25	NSA3630B
22.4	NSA3630B
24	NSA3630B
24.576	NSA3630B
25	NSA3630B
26	NSA3630B
38.4	NSA3630C
40	NSA3630C

### Dimensions



Please specify the model name, frequency, and specification number when you order products.

For further questions regarding specifications, please feel free to contact us.