

# Crystal Oscillator

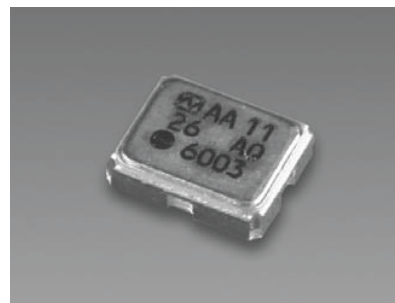
## Model Name NT2520SA Temperature-Compensated Crystal Oscillator with AFC Function (VC-TCXO) NT2520S Series

### Main Application

For mobile phones, etc.

### Features

- Supports low power supply voltage. (Supports DC +2.4 V±0.1 V to +3.4 V±5 %.)
- Ultra-compact and light with a height, cubic volume, and weight of Max. 0.8 mm, 0.0035 cm<sup>3</sup>, and 0.013 g, 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

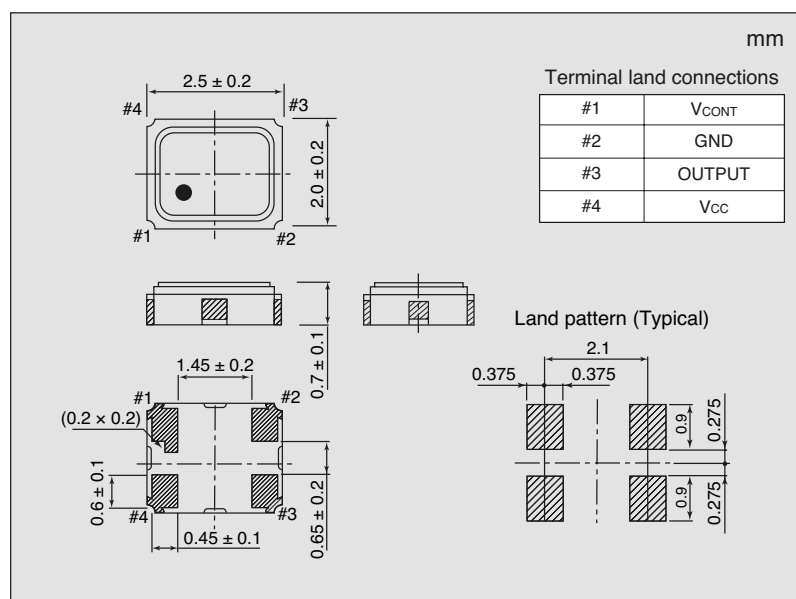
### Specifications

Item	Model	NT2520SA
Nominal frequency range (MHz)		13 to 26
Supply voltage [V <sub>CC</sub> ] (V)		+2.8
Load impedance		10 kΩ/10 pF
Current consumption (mA)		Max. 1.5
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. ±0.2×10 <sup>-6</sup> /+2.8 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> /+1.4 V±1 V *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 range, 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.
- \*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
13	NT2520SA-13M-NSA3400B
19.2	NT2520SA-19.2M-NSA3400B
26	NT2520SA-26M-NSA3400B

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