

Crystal Oscillator

Model Name NT2016SA

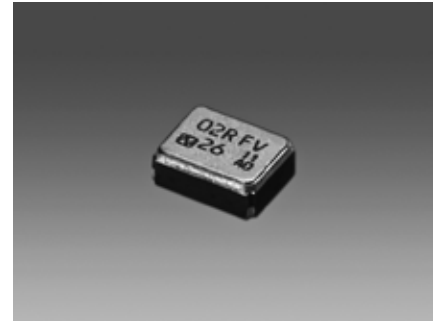
Temperature-Compensated Crystal Oscillator (TCXO)
NT2016S Series (with high-precision GPS supported)

■ 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 +1.7 V to +3.3 V.)
- Ultra-compact and light with a height, cubic volume, and weight of Max. 0.8 mm, 0.0022 cm³, and 0.008 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.
- With an AFC (Automatic Frequency Control) function. (Option)



Pb Free

RoHS Compliant
Directive 2011/65/EU

■ Specifications

Item	Model	NT2016SA		
Nominal frequency range (MHz)		13 to 52		
Standard frequency (MHz)		16.368, 16.369, 19.2, 26, 27.456	38.4	52
Supply voltage [V _{CC}] (V)		+1.8		
Load impedance		10 kΩ/10 pF		
Current consumption (mA)		Max. 1.5	Max. 1.7	Max. 2.0
Output voltage		Min. 0.8 V(p-p) (DC Coupling *1)		
Frequency/Temperature characteristics		Max. ±0.5×10 ⁻⁶		
Operating temperature range (°C)		-30 to +85		
Storage temperature range (°C)		-40 to +85		
Frequency/Voltage coefficient		Max. ±0.1×10 ⁻⁶ /+1.8 V±5 %		
Frequency/Load coefficient		Max. ±0.1×10 ⁻⁶ /(10 kΩ/10 pF) ±10 %		
Long-term frequency stability		Max. ±1.0×10 ⁻⁶ /year		

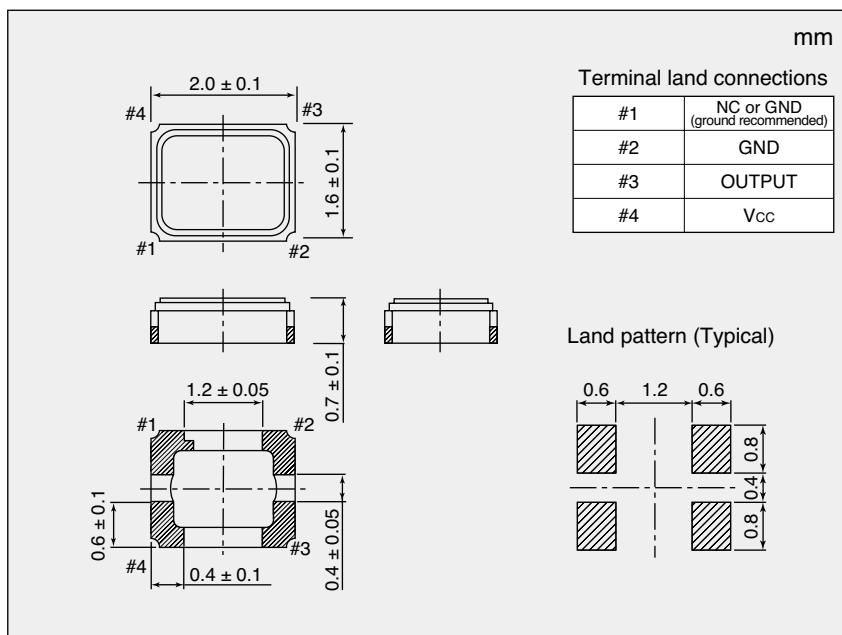
• Frequency setting conditions

1. Frequencies are set at normal temperatures (+25±2 °C).
2. 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 range, 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.

■ Dimensions



■ List of Ordering Codes

Frequency (MHz)	Ordering Code
16.368	NT2016SA-16.368M-NSA3506A
16.369	NT2016SA-16.369M-NSA3506A
19.2	NT2016SA-19.2M-NSA3506A
26	NT2016SA-26M-NSA3506B
27.546	NT2016SA-27.456M-NSA3506B
38.4	NT2016SA-38.4M-NSA3506C
52	NT2016SA-52M-NSA3506D

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