

# Crystal Oscillator

## Model Name NT2016SB

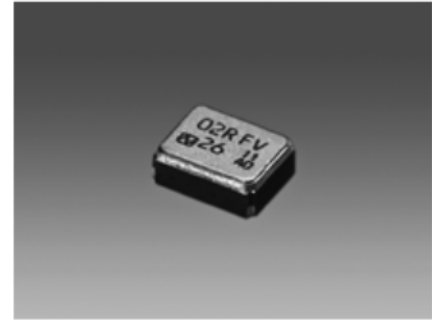
Temperature Compensated Crystal Oscillator (TCXO) with Enable/Disable(Stand-by) function  
NT2016S Series (with high-precision GPS supported)

### ■ 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 cm<sup>3</sup>, 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 Enable / Disable(Stand-by) function.



Pb Free

RoHS Compliant  
Directive 2011/65/EU

### ■ Specifications

Item	Model	NT2016SB		
Nominal frequency range (MHz)		13 to 52		
Standard frequency (MHz)		16.368, 16.369, 19.2, 26, 33.6	38.4	52
Supply voltage [V <sub>cc</sub> ] (V)		+1.8		
Load impedance		10 kΩ//10 pF		
Current consumption	Enable (mA)	Max. 1.5	Max. 1.7	Max. 2.0
	Disable (μA)	Max. 2		
Output voltage		Min. 0.8 V(p-p) (DC Coupling *1)		
Frequency/Temperature characteristics		Max. ±0.5×10 <sup>-6</sup>		
Operating temperature range (°C)		-30 to +85		
Storage temperature range (°C)		-40 to +85		
Frequency/Voltage coefficient		Max. ±0.1×10 <sup>-6</sup> /+1.8 V±5 %		
Frequency/Load coefficient		Max. ±0.1×10 <sup>-6</sup> /(10 kΩ//10 pF) ±10 %		
Long-term frequency stability		Max. ±1.0×10 <sup>-6</sup> /year		
Enable/Disable function		Enable : 80%V <sub>cc</sub> to V <sub>cc</sub> , Disable : 0V to 20% V <sub>cc</sub>		

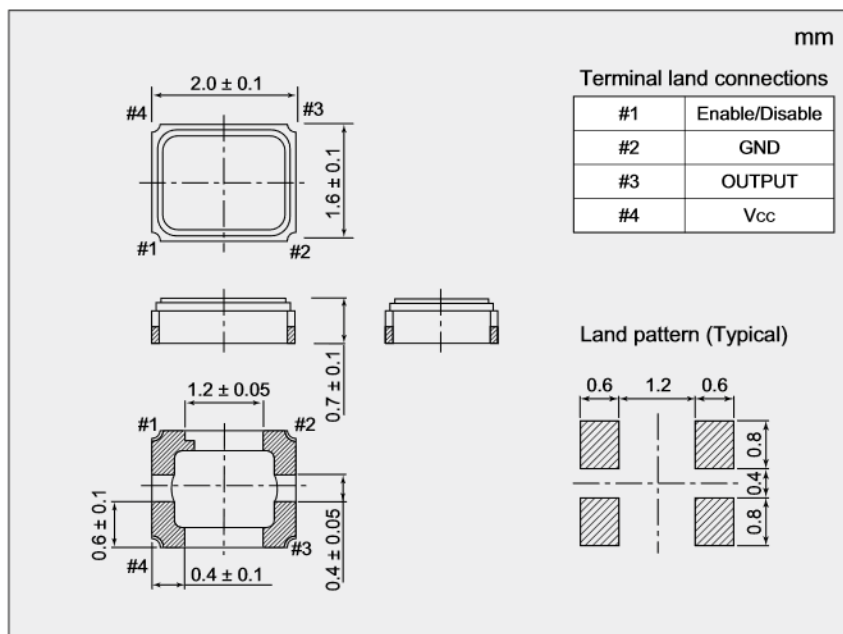
#### • Frequency setting conditions

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

• 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	NT2016SB-16.368M-NSA3561A
16.369	NT2016SB-16.369M-NSA3561A
19.2	NT2016SB-19.2M-NSA3561A
26	NT2016SB-26M-NSA3561B
33.6	NT2016SB-33.6M-NSA3561B
38.4	NT2016SB-38.4M-NSA3561C
52	NT2016SB-52M-NSA3561D

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

