

Model Name NT2016SA Temperature-Compensated Crystal Oscillator with AFC Function (VC-TCXO) NT2016S Series

■ Main Application

For mobile phones, etc.

■ Features

- Supports low power supply voltage. (Supports DC +2.4 V $\pm$ 0.1 V to 2.9 V $\pm$ 0.1 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.
- 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	NT2016SA
Standard nominal frequency (MHz)		13 to 26
Supply voltage [VCC] (V)		+2.8
Load		10 k Ω /10 pF
Current consumption (mA)		Max. 1.5
Output voltage		Min. 0.8 V(P-P) (DC Coupling *1)
Frequency stability		Max. $\pm 2.5 \times 10^{-6}$
Operating temperature range (°C)		-30 to +75
Supply variation		Max. $\pm 0.2 \times 10^{-6}$ / +2.8 V $\pm$ 5 %
Load variation		Max. $\pm 0.2 \times 10^{-6}$ / (10 k Ω /10 pF) $\pm$ 10 %
Aging		Max. $\pm 1.0 \times 10^{-6}$ / year
AFC characteristic		$\pm 9.0 \times 10^{-6}$ to $\pm 15.0 \times 10^{-6}$ / +1.4 V $\pm$ 1 V *2

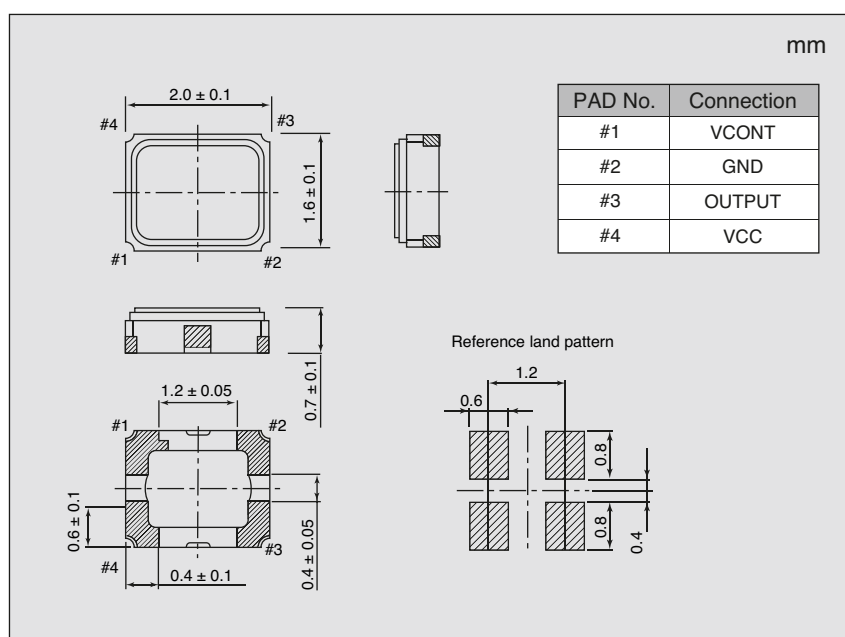
• Frequency setting conditions

1. Frequencies are set at normal temperatures (+25 $\pm$ 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.
- 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	NT2016SA-13M-NSA3456A
19.2	NT2016SA-19.2M-NSA3456A
26	NT2016SA-26M-NSA3456A

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