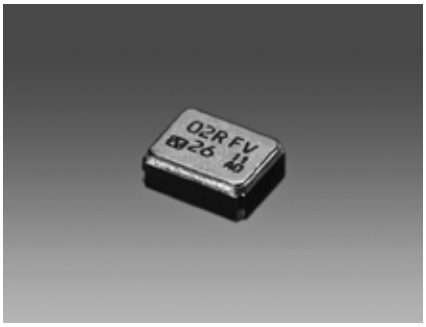
Crystal Oscillator NEW

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



Pb Free

RoHS Compliant
Directive 2002/95/EC

■ Features

- A crystal oscillator with highly stable frequency / temperature characteristics best suited for GPS.
- Supports low power supply voltage. (Supports DC +1.8 V±0.1 V to +2.9 V±0.1 V.)
- Ultra-compact and light with a height, cubic volume, and weight of Max. 0.8 mm, 0.0022 cm^3, 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.
- Products with the AFC (Automatic Frequency Control) function or Enable/ Disable function is available.

■ Specifications

Item \ Model	NT2016SA	
Nominal frequency (MHz)	16.368, 16.369, 19.2, 26 ,27.456	38.4
Supply voltage [V_{CC}] (V)	+2.8	
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. ±0.5×10^{-6}	
Operating temperature range (°C)	–30 to +85	
Storage temperature range (°C)	–40 to +85	
Frequency/Voltage coefficient	Max. ±0.2×10^{-6}/+2.8 V±5 %	
Frequency/Load coefficient	Max. ±0.2×10^{-6}/(10 kΩ//10 pF) ±10 %	
Long-term frequency stability	Max. ±1.0×10^{-6}/year	

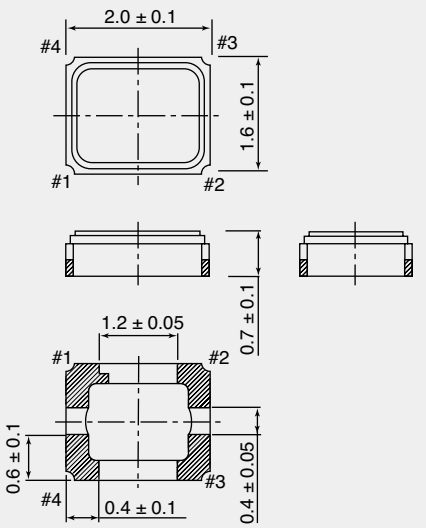
• Frequency setting conditions
1. Frequencies are set at normal temperatures (+25±2 °C).
2. Frequencies are set with a printed board that has a ground pattern attached to the underside of an oscillator.
3. Connect the #1 terminal of the oscillator to the ground that comes with the oscillator.

• 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

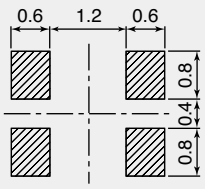
mm



Terminal land connections

#1	NC or GND (ground recommended)
#2	GND
#3	OUTPUT
#4	V_{CC}

Land pattern (Typical)



■ List of Ordering Codes

Frequency (MHz)	Ordering Code
16.368	NT2016SA-16.368M-NSA3478A
16.369	NT2016SA-16.369M-NSA3478A
19.2	NT2016SA-19.2M-NSA3478A
26	NT2016SA-26M-NSA3478B
27.546	NT2016SA-27.456M-NSA3478B
38.4	NT2016SA-38.4M-NSA3478C

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