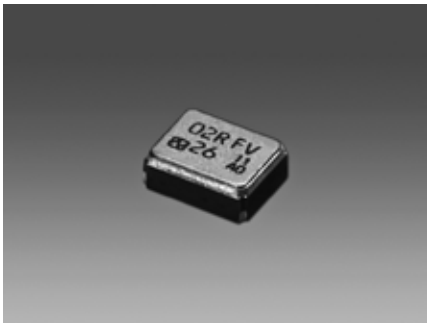
Crystal Oscillator

NT2016SE

Temperature Compensated Crystal Oscillator(TCXO) with wide temperature range for high-precision GPS

■ Main Application

Automotive communication(e.g., Automotive navigation or Telematics), Wireless module, and GPS / GNSS module, etc.



Pb Free

RoHS Compliant Directive 2011/65/EU

■ Features

- Supports ±0.5×10^{-6} / -40 to +105°C
- A crystal oscillator with highly stable frequency / temperature characteristics best suited for GPS.
- 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.
- Supports low power supply voltage. (Supports DC +1.68 V to +3.63 V.)
- 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.
- Conforms to AEC-Q100/200.
- With an AFC (Automatic Frequency Control) function. (Option)

■ Specifications

Item \ Model	NT2016SE						
Nominal Frequency Range (MHz)	10 to 52						
Standard Frequency (MHz)	16.368	16.369	19.2	26	33.6	38.4	52
Supply Voltage [V_{CC}] (V)	+1.8						
Load Impedance	10 kΩ//10 pF						
Current Consumption (mA)	Max. 1.5					Max. 2.0	Max. 2.2
Output Voltage	Min. 0.8 V(p-p) (DC Coupling *1)						
Frequency/Temperature Characteristics	Max. ±0.5×10^{-6}						
Operating Temperature Range (°C)	–40 to +105						
Storage Temperature Range (°C)	–40 to +105						
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						
Specification Number	NSC5074A	NSC5074A	NSC5074A	NSC5074B	NSC5074B	NSC5074C	NSC5074D

• Frequency setting conditions : Frequencies are set at normal temperatures (+25±2 °C)
*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.

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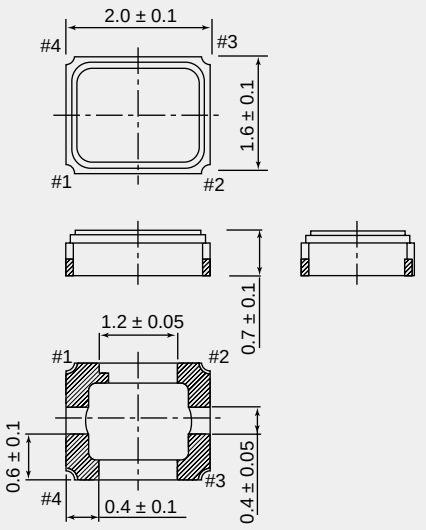

Terminal land connections

#1	NC or GND
#2	GND
#3	OUTPUT
#4	V_{CC}

Land pattern (Typical)