

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# **Crystal Oscillator**



## **NT2016SA**

**Temperature Compensated Crystal Oscillator** with AFC function(VC-TCXO)

### ■ Main Application

Smartphone / Mobile phone, Wireless module, and GPS / GNSS module, etc.

#### **■** Features

- Supports low power supply voltage. (Supports DC +1.7V to +3.3V. Standard specification: +1.8V)
- 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.





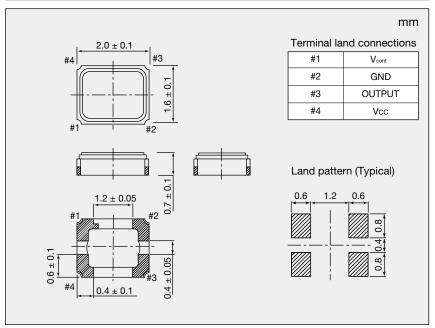


### ■ Specifications

Item Model	NT2016SA						
Nominal Frequency Range (MHz)	10 to 52						
Standard Frequency (MHz)	16.368	16.369	19.2	26	33.6	38.4	52
Supply Voltage [Vcc] (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. ±2.0×10 <sup>-6</sup>						
Operating Temperature Range (°C)	-30 to +85						
Storage Temperature Range (°C)	-40 to +85						
Frequency/Voltage Coefficient	Max. ±0.2×10 <sup>-6</sup> /+1.8 V±5 %						
Frequency/Load Coefficient	Max. ±0.2×10 <sup>-6</sup> /(10 kΩ//10 pF) ±10 %						
Long-term Frequency Stability	Max. ±1.0×10 <sup>-6</sup> /year						
Frequency Control Range	±8.0×10 <sup>-6</sup> to ±13.0×10 <sup>-6</sup> /+0.9 V±0.8 V						
Specification Number	NSA3508A	NSA3508A	NSA3508A	NSA3508B	NSA3508B	NSA3508C	NSA3508D

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

#### **■** Dimensions



Please specify the model name, frequency, and specification number when you order products. For further questions regarding specifications, please feel free to contact us.

<sup>•</sup> Products without the AFC (Automatic Frequency Control) function are available. If you require such a product, please contact us.

<sup>\*1.</sup> 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.