

# Crystal Oscillator

## Model Name NT2520SB

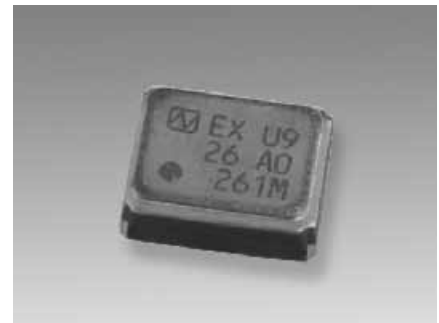
Temperature-Compensated Crystal Oscillator (TCXO)  
NT2520S Series

### Main Application

For mobile phones, etc.

### Features

- Supports low power supply voltage. (Supports DC +1.7 V to +3.3 V.)
- Compact and light with a height, cubic volume, and weight of Max. 0.9 mm, 0.004 cm<sup>3</sup>, and 0.014 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 an AFC (Automatic Frequency Control) function.(Option)



Pb Free

RoHS Compliant  
Directive 2011/65/EU

### Specifications

| Item                                  | Model | NT2520SB   |          |          |
|---------------------------------------|-------|--|----------|----------|
| Nominal frequency (MHz)               |       | 13 to 52   |          |          |
| Standard frequency (MHz)              |       | 16.368, 16.369, 19.2, 26, 27.456                 | 38.4     | 52       |
| Supply voltage [V <sub>CC</sub> ] (V) |       | +1.8, +2.8                                       |          |          |
| 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> /V <sub>CC</sub> ±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                 |          |          |

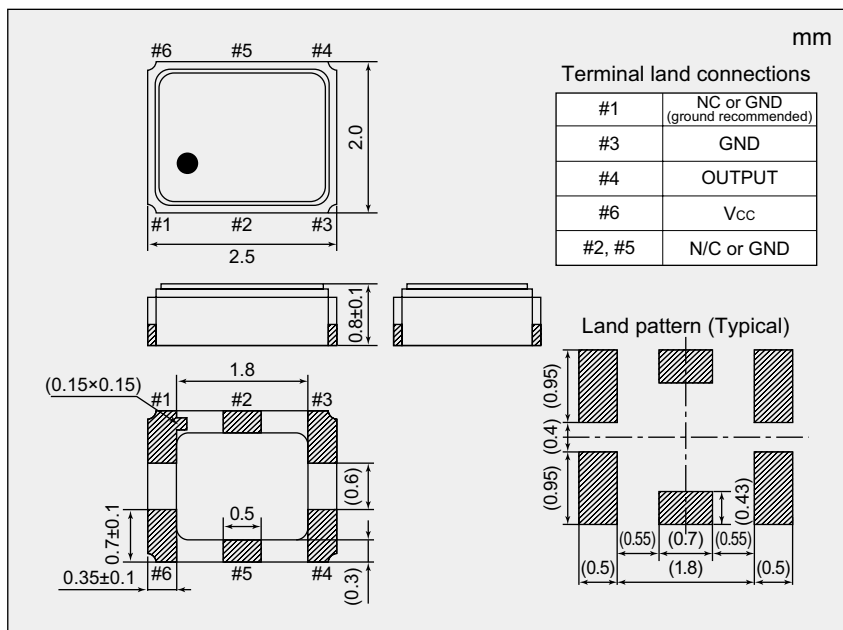
• Frequency setting conditions

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

[ Supply voltage : +1.8V]

| Frequency (MHz) | Ordering Code             |
|-----------------|---------------------------|
| 16.368          | NT2520SB-16.368M-NSA3516A |
| 16.369          | NT2520SB-16.369M-NSA3516A |
| 19.2            | NT2520SB-19.2M-NSA3516A   |
| 26              | NT2520SB-26M-NSA3516B     |
| 27.456          | NT2520SB-27.456M-NSA3516B |
| 38.4            | NT2520SB-38.4M-NSA3516C   |
| 52              | NT2520SB-52M-NSA3516D     |

[ Supply voltage : +2.8V]

| Frequency (MHz) | Ordering Code             |
|-----------------|---------------------------|
| 16.368          | NT2520SB-16.368M-NSA3515A |
| 16.369          | NT2520SB-16.369M-NSA3515A |
| 19.2            | NT2520SB-19.2M-NSA3515A   |
| 26              | NT2520SB-26M-NSA3515B     |
| 27.456          | NT2520SB-27.456M-NSA3515B |
| 38.4            | NT2520SB-38.4M-NSA3515C   |
| 52              | NT2520SB-52M-NSA3515D     |

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