

Crystal Clock Oscillator

NZ2520SEA

High-precision Crystal Clock Oscillator

Application

- WiLAN, WiMAX, Bluetooth, PLC, UWB, Car-electronics connection.

Features

This device is a new SPXO of hold over frequency tolerance as tight as $\pm 15 \times 10^{-6}$ (-40 to +85°C) by building a temperature compensating circuit in it. CMOS output despite temperature compensated circuit. This device reduces harmonics level to prevent the interference with the radio frequency by the wireless communication use.

- Overall Frequency Tolerance Max. $\pm 15 \times 10^{-6}$ at -40 to +85°C.
- CMOS output
- Harmonics level reduce.
- Conventional ratio about -17dBm at Output 40MHz, V_{CC} 2.8V, 2.4GHz band.
- Supply voltage : $1.8 \pm 0.09V$, $2.5 \pm 0.125V$, $3.3 \pm 0.165V$. *1
- Package Size : 2.5 x 2.0 x 0.8mm



Pb Free

RoHS Compliant
Directive 2011/65/EU

Absolute maximum rating
Supply Voltage (V_{CC}) -0.6 to +6.0 V
Storage Temperature Range -55 to +125 °C

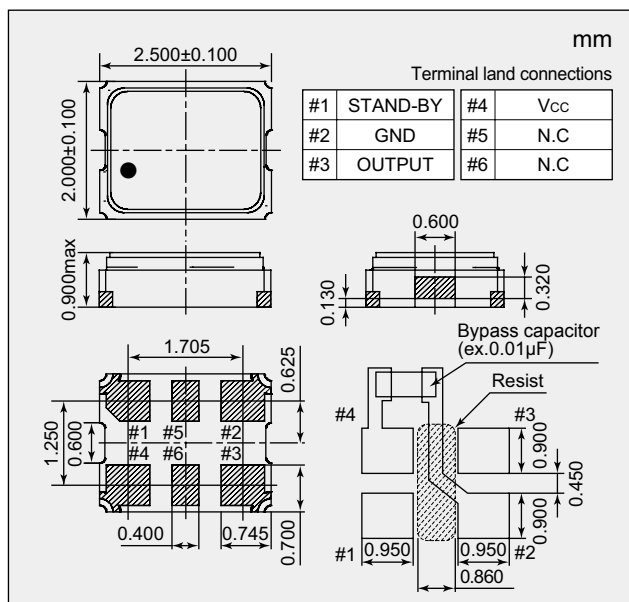
*1: Please specify one supply voltage.

Specifications

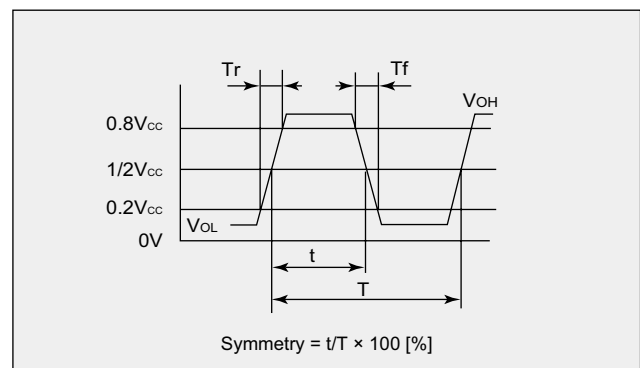
| Item | | Model | NZ2520SEA | | | | | |
|-------------------------------------|------------------|------------------------|--------------------------------------|------------------|------------------|------------------|---------------------|-----|
| Output Level | | | CMOS | | | | | |
| Nominal Frequency Range | | (MHz) | $2.75 \leq F < 11$ | $11 \leq F < 22$ | $22 \leq F < 30$ | $30 \leq F < 40$ | $40 \leq F \leq 54$ | |
| Operating Temperature Range | | (°C) | -40 to +85 | | | | | |
| Overall Frequency Tolerance *2 Max. | | ($\times 10^{-6}$) | ± 15 | | | | | |
| Current Consumption Max. | During Operation | +1.8 V, +25 °C | (mA) | 3.5 | 4.0 | 4.5 | 5.0 | 6.0 |
| | | +2.5 V, +25 °C | | 4.0 | 4.5 | 5.0 | 5.5 | 6.5 |
| +3.3 V, +25 °C | 4.5 | 5.0 | | 5.5 | 6.0 | 8.0 | | |
| | During Standby | +1.8 to +3.3 V, +25 °C | (μ A) | 10 | | | | |
| V_{OL} Max. / V_{OH} Min. | | (V) | $0.2 V_{CC} / 0.8 V_{CC}$ | | | | | |
| T_r Max. / T_f Max. | | (ns) | 5/5 (at 0.2 to 0.8V _{CC}) | | | | | |
| Symmetry Min. to Max. | | (%) | 45 to 55 (at 1/2V _{CC}) | | | | | |
| Load (C _L) Max. | | (pF) | 15 | | | | | |
| Start-up Time Max. | | (ms) | 10 | | | | | |
| Standby function | | | Available (Three-state) | | | | | |

*2: Inclusive of +25°C tolerance, temp. characteristics, and supply voltage change.

Dimensions



Output Waveform <CMOS>



Standby Function

| #1 Input | #3 Output |
|--|----------------|
| Level H ($0.8 V_{CC} \leq V_{IH} \leq V_{CC}$) or OPEN | Operating |
| Level L ($V_{IL} \leq 0.2 V_{CC}$) | High impedance |

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■ Specification Number

| Overall Frequency Tolerance | Operating Temperature Range(°C) | Supply Voltage (V) | | |
|-----------------------------|---------------------------------|--------------------|------------|------------|
| | | +1.8±0.09 | +2.5±0.125 | +3.3±0.165 |
| ±100×10 ⁻⁶ | -40 to +125 | NSA3513A | NSA3513B | NSA3513C |

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