



**THE DATASHEET OF
NSC5103A-25M**



Crystal Clock Oscillator

NZ1612SH

Standard Type

Application

For Smartphone, Wireless LAN, WiMAX, Bluetooth
For Wearable devices

Features

- Ultra compact and light. Dimensions : 1.6 x 1.2 x 0.6 mm, weight : 0.01 g.
- Supports low frequencies starting from 2MHz.
- Supports a wide temperature range from -40 to +125°C.
- Low phase jitter (Typ. 100fs (Frequency Offset : 12kHz to 20MHz)@80MHz, 3.3V)
- Taped units enable automatic mounting IR Reflow (lead free) is possible.
- Lead-free.



Pb Free

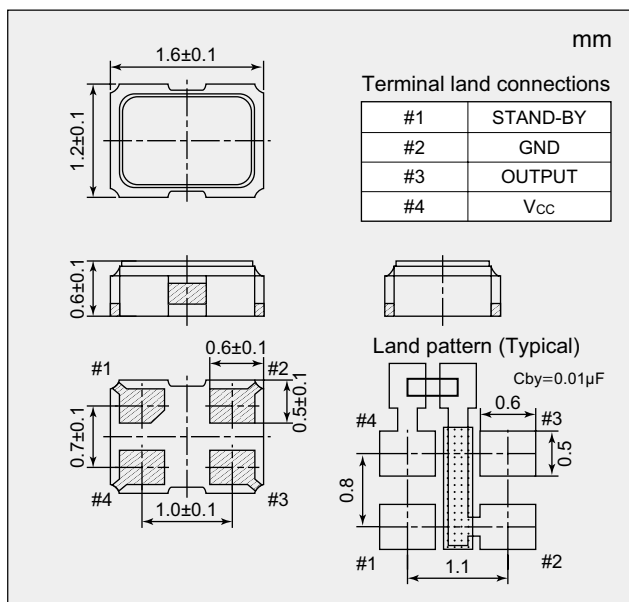
RoHS Compliant
Directive 2011/65/EU
Directive (EU) 2015/863

Absolute maximum rating
Supply Voltage (V_{CC}) -0.3 to +4.0 V
Storage Temperature Range -55 to +125 °C

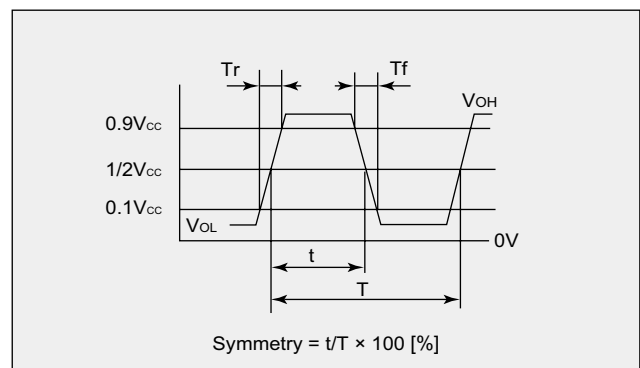
Specifications

| Item | Model | NZ1612SH | | | | |
|---|----------------------|---|-------------|------------|------------|------------|
| Output Specification | | CMOS | | | | |
| Nominal Frequency Range | (MHz) | 2 < F ≤ 80 | | | | |
| Overall Frequency Tolerance | (×10 ⁻⁶) | ±100 | ±50 | ±50 | ±25 | |
| Operating Temperature Range | (°C) | -40 to +125 | -40 to +105 | -40 to +85 | -20 to +70 | |
| Supply Voltage | (V) | +1.8 to +3.3 | | | | |
| Current Consumption Max. | During Operation | +25 °C | (mA) | | | 2.5 to 9.0 |
| | During Standby | +25 °C | (μA) | | | 20 |
| V _{OL} Max. / V _{OH} Min. | (V) | 0.1 V _{CC} / 0.9 V _{CC} | | | | |
| Tr Max. / Tf Max. | (ns) | 6 / 6 (at 0.1 V _{CC} to 0.9 V _{CC}) | | | | |
| Symmetry Min. to Max. | (%) | 45 to 55 (at 0.5 V _{CC}) | | | | |
| Load (C _L) Max. | (pF) | 15 | | | | |
| Start-up Time Max. | (ms) | 4 | | | | |
| Standby function | | Available (Three-state) | | | | |

Dimensions



Output Waveform <CMOS>



Standby Function

| #1 Input | #3 Output |
|---|-----------------------|
| Level H ($0.7 V_{CC} \leq V_{IH} \leq V_{CC}$) or OPEN is selected. | Oscillation output ON |
| Level L ($V_{IL} \leq 0.3 V_{CC}$) is selected. | High impedance |

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| Overall Frequency Tolerance | Operating Temperature Range (°C) | Supply Voltage (V) | | | |
|-----------------------------|----------------------------------|--------------------|-----------|----------|-----------|
| | | +1.8±0.18 | +2.5±0.25 | +3.0±0.3 | +3.3±0.33 |
| ± 100 × 10 ⁻⁶ | -40 to +125 | NSC5152A | NSC5152B | NSC5152C | NSC5152D |
| ± 50 × 10 ⁻⁶ | -40 to +105 | NSC5103A | NSC5103B | NSC5103C | NSC5103D |
| ± 50 × 10 ⁻⁶ | -40 to +85 | NSC5101A | NSC5101B | NSC5101C | NSC5101D |
| ± 25 × 10 ⁻⁶ | -20 to +70 | NSC5100A | NSC5100B | NSC5100C | NSC5100D |

Please specify the model name, frequency, and specification number when you order products.

For further questions regarding specifications, please feel free to contact us.

Looking for pricing, stock, or lifecycle information?

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