

Crystal Clock Oscillator **NEW**

NZ2520S Series

Model name

NZ2520SB Frequency stability of $\pm 100 \times 10^{-6}$.

Application

- For compact mobile information equipment, such as DVC, DSC, notebook PC, and PDA

Features

- Size: A minimum-size crystal clock oscillator with dimensions of 2.5 x 2.0 mm.
- Thickness: Ultra-thin with a thickness of 0.9 mm.
- Weight: Weighs only 0.02 g, giving unparalleled light-weight.
- This crystal clock oscillator can support low frequencies (from 1.5 MHz); an achievement not easy for other crystal oscillators of the same size to equal.
- Automatic mounting by taping and IR reflow (lead-free) are possible.
- Lead-free.



Pb Free

RoHS Compliant
Directive 2002/95/EC

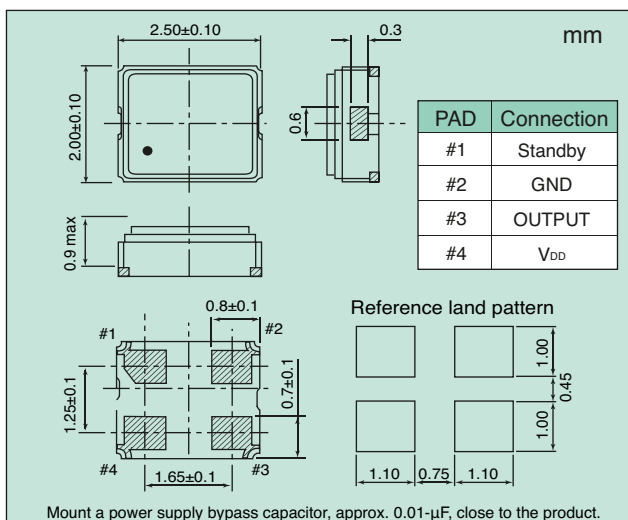
Absolute maximum rating
Power supply voltage (V_{DD})-0.5 to +4.0V DC
Storage temperature range -55 to +125°C

Specifications

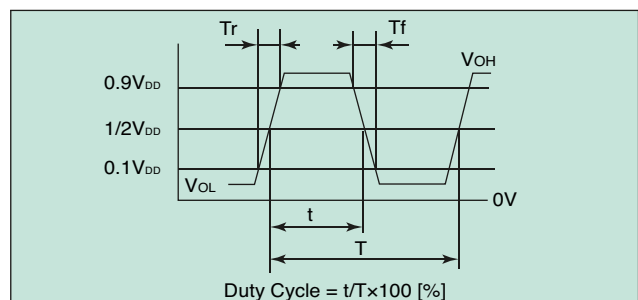
Item		Model	NZ2520SB					
Output level			C-MOS					
Frequency range ¹		(MHz)	1.5 ≤ F < 10	10 ≤ F < 20	20 ≤ F < 30	30 ≤ F < 40	40 ≤ F < 50	50 ≤ F ≤ 60
Operating temperature range ²		(°C)	-20 to +70					
Frequency Stability		($\times 10^{-6}$)	±100					
Power supply voltage		(V)	+1.8±0.1	+2.5±0.1	+3.0±0.1	+3.3±0.1		
Consumption current	During operation	+1.8V, 25°C	2.5	3.5	4.0	4.5	5.0	5.5
		+2.5V, 25°C	3.0	4.0	4.5	5.0	5.5	6.0
		+3.0V, 25°C	3.5	4.5	5.0	5.5	6.0	6.5
		+3.3V, 25°C	3.5	4.5	5.0	5.5	6.0	7.0
	During standby	+1.8V, 25°C	10					
		+2.5V, 25°C	10					
		+3.0V, 25°C	10					
		+3.3V, 25°C	10					
$V_{OL} \text{ max}/V_{OH} \text{ min}$		(V)	0.1 V_{DD} /0.9 V_{DD}					
$T_r \text{ max}/T_f \text{ max}$		(ns)	5/5					
Duty Cycle min. to max.		(%)	45 to 55					
Load (C _L) max		(pF)	15					
Oscillation start time max		(ms)	10					
Standby function			Available (tristate)					
Number for specifying an order			NSA3412A	NSA3413A	NSA3414A	NSA3415A		

*1: If you require a product with a frequency not given above, please contact us. *2: If you require a product with an operating temperature range not given above, please contact us.

Dimensions



Output Waveform <C-MOS>



Standby Function

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

How to Specify an Order

When ordering our products, specify them with an "Ordering Code" that consists of the following:

[Model name] - [Frequency (up to 9 digits)] M - [Number for specifying an order]

If you have any queries concerning our standard frequencies and numbers for specifying orders, please contact our sales representatives or visit our homepage (<http://www.ndk.com/>).

Example 1: When ordering a product with model name: NZ2520SB, frequency: 20 MHz, frequency stability: $\pm 100 \times 10^{-6}$, and power supply voltage: 1.8 V
Ordering Code: NZ2520SB - 20.000000M - NSA3412A
Example 2: When ordering a product with model name: NZ2520SB, frequency: 20 MHz, frequency stability: $\pm 100 \times 10^{-6}$, and power supply voltage: 3.3 V
Ordering Code: NZ2520SB - 20.000000M - NSA3415A