Crystal Clock Oscillator NEW

Crystal Bridge to the Future

NZ2520S Series

■ Model name

NZ2520SB Frequency stability of ±50 x 10^{-6}.

Pb Free

RoHS Compliant
Directive 2002/95/EC

■ Application

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

■ Features

- Compact and light. Dimensions and weight: 2.5 x 2.0 mm, 0.9 mm, and 0.02 g.
- 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.

Absolute maximum rating
Power supply voltage (V_{DD}) –0.5 to +4.0 V
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	60 ≤ F < 70	70 ≤ F ≤ 80
Operating temperature range *2			(°C)	–40 to +85							
Frequency Stability			(x10^{-6})	±50							
Current consumption max	During operation	+3.3 V, 25 °C	(mA)	3.5	4.5	5.0	5.5	6.0	7.0	8.0	9.0
	During standby	+3.3 V, 25 °C	(µA)	10							
V_{OL} max/V_{OH} min			(V)	0.1 V_{DD}/0.9 V_{DD}							
Tr max/Tf max			(ns)	5/5							
Duty Cycle min. to max.			(%)	45 to 55							
Load (C_L) max			(pF)	15							
Oscillation start time max			(ms)	4							
Standby function				Available (tristate)							

*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.

■ List of Codes for Placing an Order

List of Codes for Placing an Order		NSA3415E
Power supply voltage [V_{DD}]	(V)	+3.3±0.33

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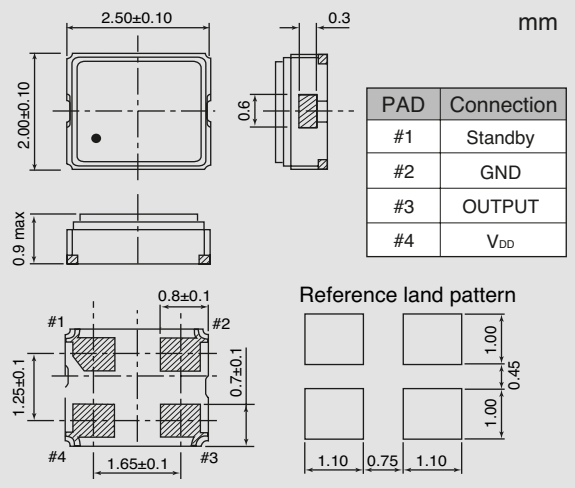
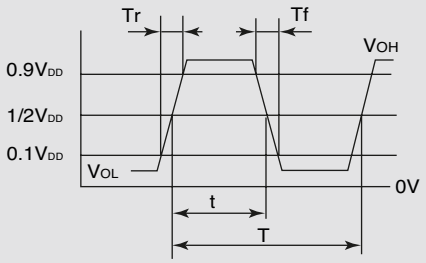
■ Dimensions



PAD	Connection
#1	Standby
#2	GND
#3	OUTPUT
#4	V_{DD}

Mount an approx. 0.01 µF bypass capacitor between V_{DD} and GND (close to the product)

■ Output Waveform <C–MOS>



Duty Cycle = t/T × 100 [%]

■ 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

Example : When ordering a product with model name: NZ2520SB, frequency: 20 MHz, frequency stability: ±50 x 10^{-6}, and power supply voltage: 3.3 V
Ordering Code: NZ2520SB – 20.000000M – NSA3415E

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/).