

Crystal Clock Oscillator

NZ2520S Series

Low Phase Noise Type

Model name

NZ2520SD Overall frequency tolerance of $\pm 50 \times 10^{-6}$.

Application

- For wireless LAN



Pb Free

RoHS Compliant
Directive 2002/95/EC

Features

- Low phase noise, low voltage, low consumption current, and high stability, make this product ideal for wireless LAN.
- Compact and light. Dimensions : 2.5 x 2.0 x 0.9 mm, weight : 0.02 g.
- Automatic mounting by taping and IR reflow (lead-free) are possible.
- Lead-free.

Absolute maximum rating
Supply voltage (V_{DD}) -0.6 to $+6.0$ V
Storage temperature range -55 to $+125$ °C

Specifications

Item		Model	NZ2520SD						
Output level			CMOS						
Nominal frequency range *1		(MHz)	$1.5 \leq F < 10$	$10 \leq F < 20$	$20 \leq F < 30$	$30 \leq F \leq 40$	$40 < F < 50$	$50 \leq F \leq 60$	
Operating temperature range *2		(°C)	-40 to +85						
Overall frequency tolerance		($\times 10^{-6}$)	± 50						
Current consumption max	During operation	+3.3 V, 25 °C	(mA)	3.5	4.0	4.5	5.5	6.0	6.5
	During standby	+3.3 V, 25 °C	(μ A)	10					
$V_{OL\ max}/V_{OH\ min}$		(V)	$0.1 V_{DD}/0.9 V_{DD}$						
$T_r\ max/T_f\ max$		(ns)	6/6						
Symmetry min. to max.		(%)	45 to 55						
Load (C_L) max		(pF)	15						
Start-up time max		(ms)	4						
Standby function			Available (tristate)						
Phase noise		+3.3 V, 25 °C	(dBc/Hz)	$F_{out} \pm 1\ kHz : -145$ (Typ) $F_{out} \pm 100\ kHz : -158$ (Typ)					

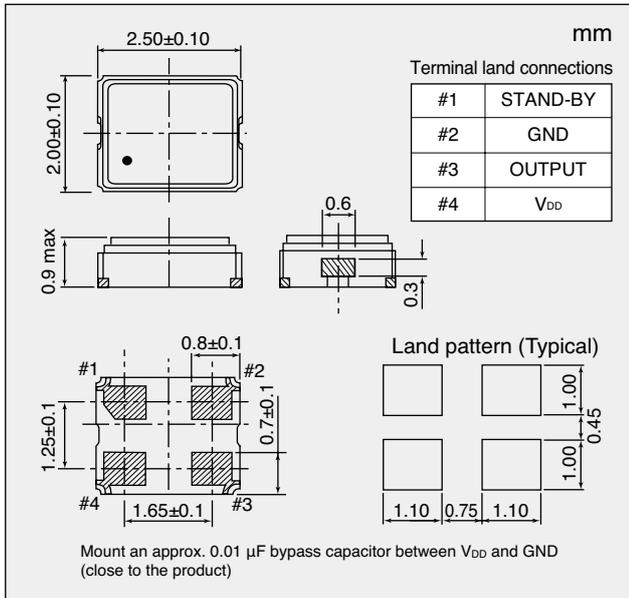
*1: If you require a product with a frequency not given above, please contact us.

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

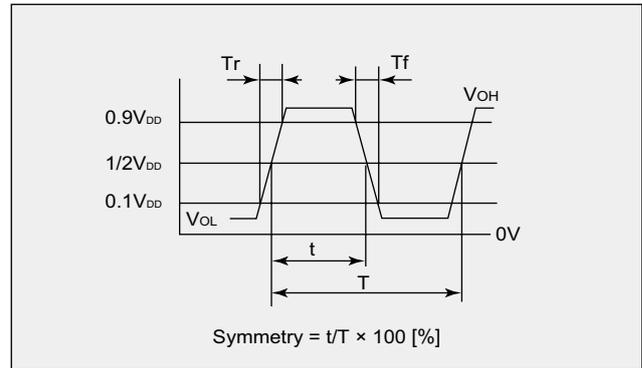
List of Codes for Placing an Order

List of Codes for Placing an Order		NSA3449E
Supply voltage	(V)	+3.3 \pm 0.33

■ Dimensions



■ Output Waveform <CMOS>



■ 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: NZ2520SD, frequency: 20 MHz, overall frequency tolerance: $\pm 50 \times 10^{-6}$, and supply voltage: 3.3 V
Ordering Code: NZ2520SD – 20.000000M – NSA3449E

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/>).