

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 2011/65/EU

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_{CC}) -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 ≤ 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							
Overall frequency tolerance				(×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	7.5	8.5	
	During standby	+3.3 V, 25 °C	(μA)	10								
V _{OL} max/V _{OH} min				(V)	0.1 V _{CC} /0.9 V _{CC}							
Tr max/Tf 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 (Three-state)							
Phase noise	+3.3 V, 25 °C	F _{out} ±1 kHz(Typ)	(dBc/Hz)	F=20MHz		F=40MHz		F=60MHz		F=80MHz		
		-151		-148		-142		-136				
		F _{out} ±100 kHz (Typ)		-157		-156		-156		-154		

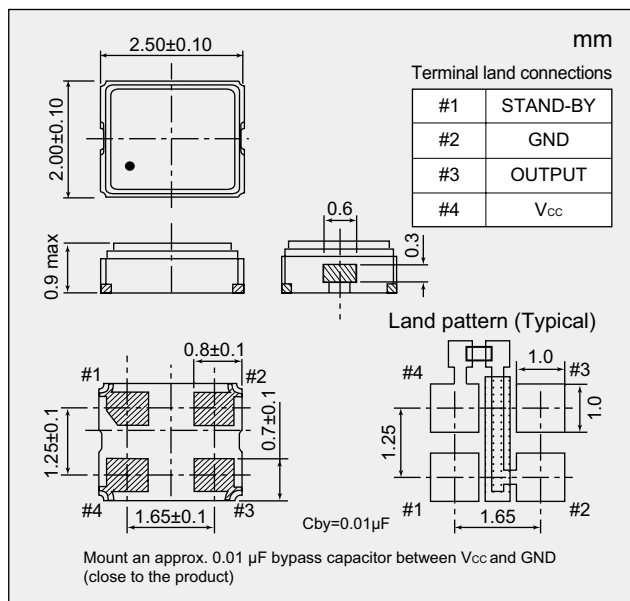
*1: If you require a product with a frequency not given above, please contact us.

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

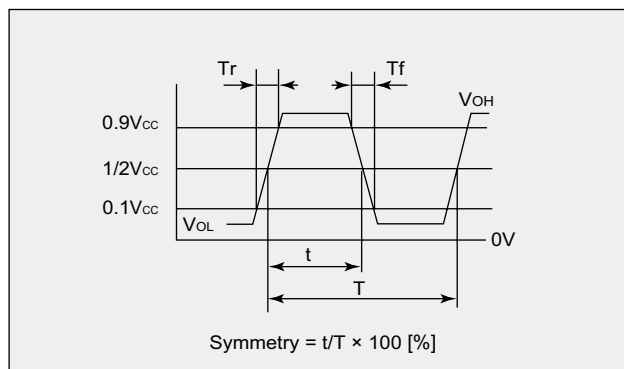
List of Codes for Placing an Order

List of Codes for Placing an Order		NSA3449E
Supply voltage (V_{CC})	(V)	$+3.3 \pm 0.33$

■ 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

■ 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/>).