Crystal Clock Oscillator



NZ2520S Series

Low Phase Noise Type

■ Model name

NZ2520SD Overall frequency tolerance of ±50 x 10-6.

■ Application

 For High-quality-audio, Smartphone, Tablet computers, Wireles module, Notebook PC and DSC

■ Features

- Low phase noise make this product ideal for High quality audio.
- Compact and light. Dimensions: 2.5 x 2.0 x 0.9 mm, weight: 0.02 g.
- Wide frequency range: 1.5 to 80 MHz.
- Automatic mounting by taping and IR reflow (lead-free) are possible.
- · Lead-free.





Absolute maximum rating Supply voltage (Vcc) –0.6 to +6.0 V Storage temperature range –55 to +125 °C

■ Specifications

ltem 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)			(°C)	-10 to +70							
Overall frequency tolerance ((×10 ⁻⁶)	±50							
Current consumption	During operation	+1.8 V, +25 °C	(mA)	1.8	2.1	2.5	3.5	4.0	4.5	5.0	5.5
		+2.5 V, +25 °C		2.5	3.0	3.5	4.5	5.0	5.5	6.5	7.5
		+2.8 V, +25 °C		3.0	3.5	4.0	5.0	5.5	6.0	7.0	8.0
max		+3.3 V, +25 °C		3.5	4.0	4.5	5.5	6.0	6.5	7.5	8.5
	During standby	+1.8 V to +3.3 V, +25 °C	(µA)				1	0			
Vol max/Voн min (V)			(V)	0.1 Vcc/0.9 Vcc							
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			F=20MHz		F=40MHz		F=60MHz		F=80MHz		
	+1.8 V, 25 °C +2.5 to +3.3 V, +25 °C	Fout±1 kHz(Typ)	(dBc/Hz)	-1-	47	-14	43	-1	39	-1	36
		Fout±100 kHz(Typ)		-1	56	-1:	54	-1	50	-1	50
		Fout±1 kHz(Typ)		-151		-148		-142		-136	
		Fout±100 kHz(Typ)		-1	57	-1	56	-1	56	-1	54

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

■ List of Codes for Placing an Order

List of Codes for Placing an Order (The purchase order number differs according to the difference in supply voltage.)		NSA3446B	NSA3447B	NSA3448B	NSA3449B	
Supply voltage (Vcc)	(V)	+1.8±0.18	+2.5±0.25	+2.8±0.28	+3.3±0.33	

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

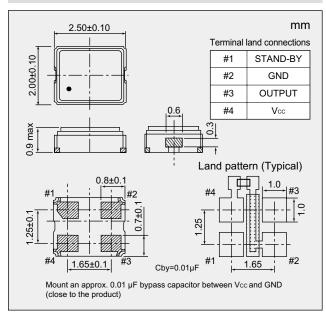
Crystal Clock Oscillator



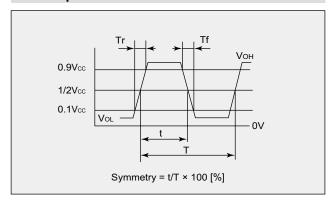
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Low Phase Noise Type

■ Dimensions



■ Output Waveform < CMOS>



■ Standby Function

#1 Input	#3 Output			
Level H (0.7 $V_{CC} \le V_{IH} \le V_{CC}$) or OPEN is selected.	Oscillation output ON			
Level L (V _{IL} ≤ 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 1: When ordering a product with model name: NZ2520SD, frequency: 20 MHz, overall frequency tolerance: ±50 x 10⁻⁶, and supply voltage: 1.8 V

Ordering Code: NZ2520SD - 20.000000M - NSA3446B

Example 2: When ordering a product with model name: NZ2520SD, frequency: 20 MHz, overall frequency tolerance: ±50 x 10⁻⁶, and supply voltage: 3.3 V

Ordering Code: NZ2520SD – 20.000000M – NSA3449B

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/).