

Crystal Clock Oscillator

NZ2520SD

Low Phase Noise Type

■ Application

- For High-quality-audio, Smartphone, Tablet computers, Wireless 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.

Pb
Free

RoHS Compliant
Directive 2011/65/EU
Directive (EU) 2015/863



Absolute maximum rating
Supply Voltage (V_{CC}) -0.6 to +6.0 V
Storage Temperature Range -55 to +125 °C

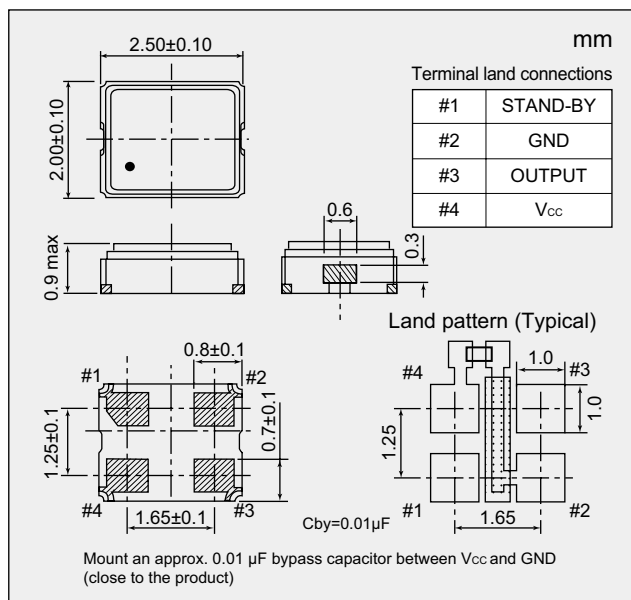
■ Specifications

Item			Model	NZ2520SD		
Output Specification				CMOS		
Nominal Frequency Range		(MHz)		1.5 ≤ F ≤ 80		
Overall Frequency Tolerance		(×10 ⁻⁶)		±50	±30	±20
Operating Temperature Range		(°C)		-40 to +85	-10 to +70	-10 to +60
Supply Voltage		(V)		+1.8 to +3.3		
Current Consumption Max.	During Operation	+25 °C	(mA)	1.8 to 8.5		
	During Standby	+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)		

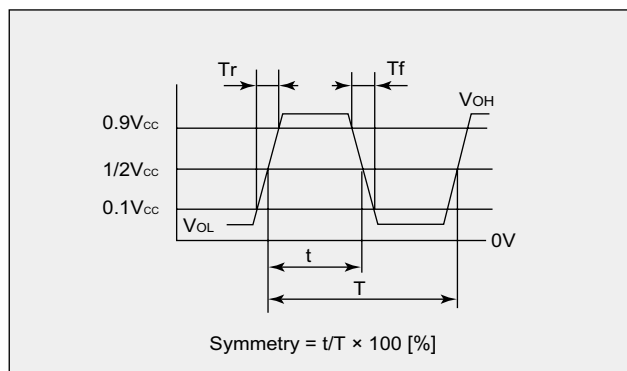
■ Characteristics

			F=20MHz	F=40MHz	F=60MHz	F=80MHz
+1.8V, +25 °C	F _{out} ±1 kHz (Typ.)	(dBc/Hz)	-147	-143	-139	-136
	F _{out} ±100 kHz (Typ.)		-156	-154	-150	-150
+2.5 to +3.3V, +25 °C	F _{out} ±1 kHz (Typ.)	(dBc/Hz)	-151	-148	-142	-136
	F _{out} ±100 kHz (Typ.)		-157	-156	-156	-154

■ Dimensions



■ Output Waveform <CMOS>



■ Standby Function

#1 Input	#3 Output
Level H (0.7 V _{CC} ≤ V _{IH} ≤ V _{CC}) or OPEN is selected.	Oscillation output ON
Level L (V _{IL} ≤ 0.3 V _{CC}) is selected.	High impedance

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■ Specification Number

Overall Frequency Tolerance	Operating Temperature Range(°C)	Supply Voltage (V)			
		+1.8±0.18	+2.5±0.25	+2.8±0.28	+3.3±0.33
±50 × 10 ⁻⁶	-40 to +85	NSA3446E	NSA3447E	NSA3448E	NSA3449E
±30 × 10 ⁻⁶	-10 to +70	NSA3446C	NSA3447C	NSA3448C	NSA3449C
±20 × 10 ⁻⁶	-10 to +60	NSA3446D	NSA3447D	NSA3448D	NSA3449D

Please specify the model name, frequency, and specification number when you order products.

For further questions regarding specifications, please feel free to contact us.