

# Crystal Clock Oscillator

## NZ2520SF

## Ultralow Power Type

### Application

- For Portable equipment (ex. Mobile Phone, Digital Media Player, PND, Notebook PC, etc)

### Features

- Ultralow power-driven (Min. +0.8V) crystal clock oscillator, ideal for mobile devices.
- Compact and light. Dimensions : 2.5 x 2.0 x 0.9 mm, weight : 0.02 g.
- Wide frequency range : 1.5 to 50MHz
- Taped units enable automatic mounting and IR Reflow (lead free) is possible.
- Lead-free.



Pb Free

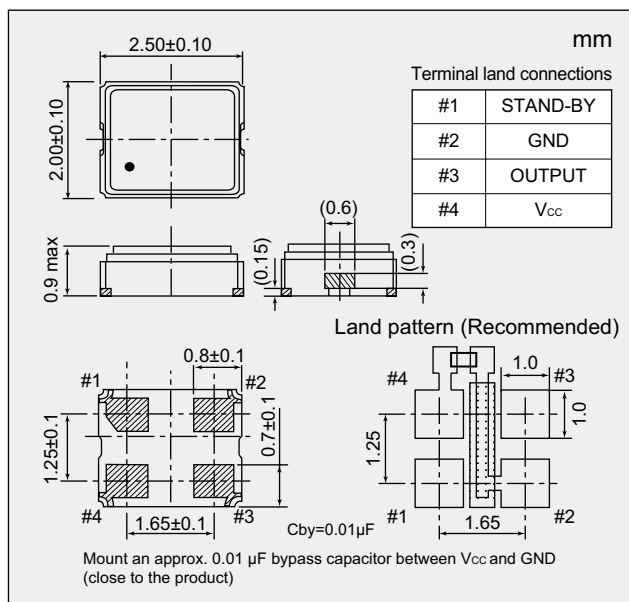
RoHS Compliant  
Directive 2011/65/EU  
Directive (EU) 2015/863

Absolute maximum rating  
Supply Voltage (V<sub>CC</sub>) -0.5 to +4.0 V  
Storage Temperature Range -55 to +125 °C

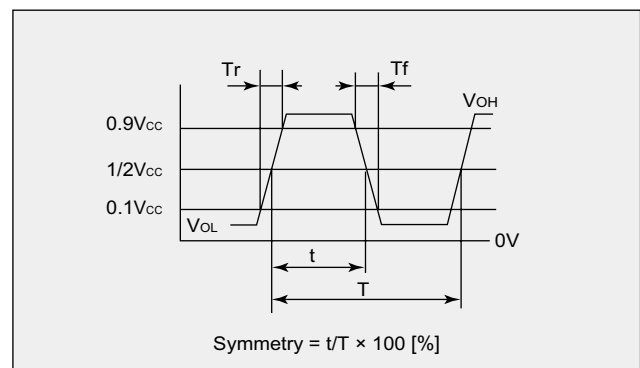
### Specifications

Item	Model	NZ2520SF		
Output Specification		CMOS		
Nominal Frequency Range	(MHz)	1.5 ≤ F ≤ 50		
Overall Frequency Tolerance	(×10 <sup>-6</sup> )	±50	±30	
Operating Temperature Range	(°C)	-40 to +85	-10 to +70	
Supply Voltage	(V)	+0.9 to +1.5		
Current Consumption Max.	During Operation	+25 °C	(mA)	1.5 to 6.0
	During Standby	+25 °C	(μA)	100
V <sub>OL</sub> Max. / V <sub>OH</sub> Min.	(V)	0.1 V <sub>CC</sub> /0.9 V <sub>CC</sub>		
Tr Max. / Tf Max.	(ns)	5/5		
Symmetry Min. to Max.	(%)	45 to 55		
Load (C <sub>L</sub> ) Max.	(pF)	15		
Start-up Time Max.	(ms)	4		
Standby function		Available (Three-state)		

### 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

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**NZ2520SF**

**Ultralow Power Type**

## ■ Specification Number

Overall Frequency Tolerance	Operating Temperature Range(°C)	Supply Voltage (V)		
		+0.9±0.1	+1.2±0.1	+1.5±0.1
±50×10 <sup>-6</sup>	-40 to +85	NSA3468E	NSA3477E	NSA3469E
±30×10 <sup>-6</sup>	-10 to +70	NSA3468C	NSA3477C	NSA3469C

Please specify the model name, frequency, and specification number when you order products.  
For further questions regarding specifications, please feel free to contact us.

Mar - 2024