

Crystal Clock Oscillator

NZ2520SHB

Low Current Consumption Type (32.768kHz)

Application

For Smartphone and Tablet computer etc.

Features

- Supports a wide temperature range from -40 to +125°C.
- Compact and light. Dimensions : 2.5 x 2.0 x 0.9 mm, weight : 0.02 g.
- Quick oscillation start up time is available compared to our Tuning Fork Crystal.
- Conforms to AEC-Q200.



Pb Free

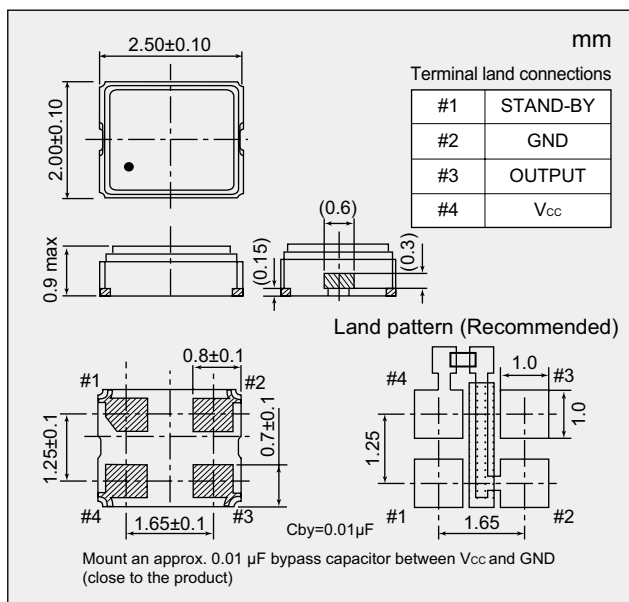
RoHS Compliant
Directive 2011/65/EU
Directive (EU) 2015/863

Absolute maximum rating
Supply Voltage (V_{CC}) -0.3 to +4.5 V
Storage Temperature Range -55 to +125 °C

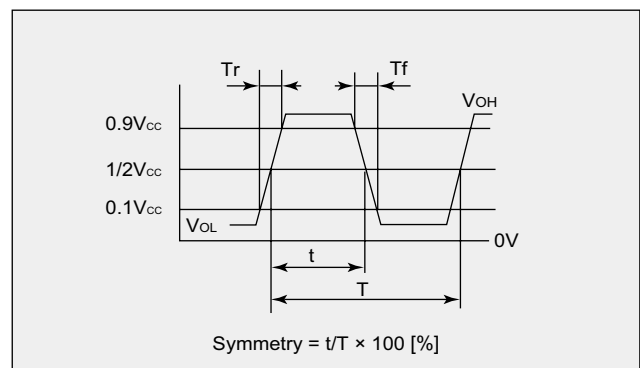
Specifications

Item		Model	NZ2520SHB			
Output Specification			CMOS			
Nominal Frequency		(kHz)	32.768			
Overall Frequency Tolerance		($\times 10^{-6}$)	± 100	± 50	± 50	± 30
Operating Temperature Range		(°C)	-40 to +125	-40 to +105	-40 to +85	-40 to +85
Supply Voltage (V _{CC})		(V)	1.8 to +3.3			
Current Consumption Max.	During Operation	+25°C, No-load	(μA)		18 (Typ.10μA)	32 (Typ.18μA)
	During Standby	+25°C	(μA)		5	
V _{OL} Max. / V _{OH} Min.		(V)	0.1 V _{CC} / 0.9 V _{CC}			
Tr Max. / Tf Max.		(ns)	50 / 50 (at 0.1V _{CC} to 0.9V _{CC})			
Symmetry Min. to Max.		(%)	45 to 55 (at 0.5V _{CC})			
Load (C _L) Max.		(pF)	15			
Start-up Time Max.		(ms)	20 (V _{CC} : +2.5V ~ +3.3V), 30 (V _{CC} : +1.8V)			
Frequency Aging Max.		($\times 10^{-6}$)	± 5 (+25°C, First year)			
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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■ Specification Number

Overall Frequency Tolerance	Operating Temperature Range (°C)	Supply Voltage (V)			
		+1.8±0.18	+2.5±0.25	+3.0±0.3	+3.3±0.33
±100 × 10 ⁻⁶	-40 to +125	NSC5135A	NSC5135B	NSC5135C	NSC5135D
±50 × 10 ⁻⁶	-40 to +105	NSC5136A	NSC5136B	NSC5136C	NSC5136D
±50 × 10 ⁻⁶	-40 to +85	NSC5137A	NSC5137B	NSC5137C	NSC5137D
±30 × 10 ⁻⁶	-40 to +85	NSC5308A	NSC5308B	NSC5308C	NSC5308D

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