

Crystal Clock Oscillator

NZ2520SHA

Automotive safety

■ Application

For Automotive safety (e.g., Millimeter wave radar or Image processing for self-driving)

■ Features

- High quality and high reliability design for Automotive safety
- Conforms to AEC-Q100/200.
- Supports a wide frequency range. (1.5 to 125MHz)
- 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.
- Taped units enable automatic mounting IR Reflow (lead free) is possible.
- Lead-free.
- Output Level : CMOS

Pb
Free

RoHS Compliant
Directive 2011/65/EU

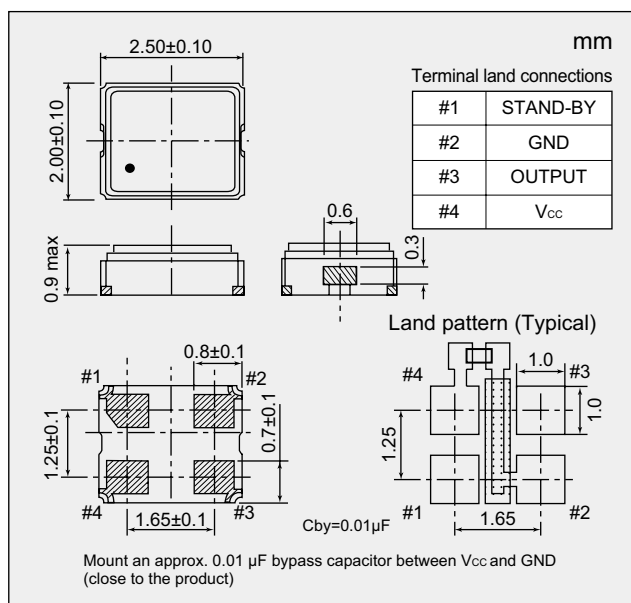
Absolute maximum rating
Supply Voltage (V_{CC}) -0.3 to +4.0 V
Storage Temperature Range -55 to +125 °C



■ Specifications

Item			Model	NZ2520SHA	
Output				CMOS	
Nominal Frequency Range			(MHz)	$1.5 \leq F \leq 80$	$80 < F \leq 125$
Overall Frequency Tolerance			($\times 10^{-6}$)	± 100	
Operating Temperature Range			($^{\circ}\text{C}$)	-40 to $+125$	
Supply Voltage			(V)	$+1.8$ to $+3.3$	
Current Consumption Max.	During Operation	$+25\text{ }^{\circ}\text{C}$	(mA)	2.5 to 9.0	9.5 to 20
	During Standby	$+25\text{ }^{\circ}\text{C}$	(μA)	20	
V_{OL} Max. / V_{OH} Min.			(V)	$0.1 V_{\text{CC}}$ / $0.9 V_{\text{CC}}$	$0.2 V_{\text{CC}}$ / $0.8 V_{\text{CC}}$
T_{r} Max. / T_{f} Max.		$+1.8\text{ V}$	(ns)	$6 / 6$ (at $0.1 V_{\text{CC}}$ to $0.9 V_{\text{CC}}$)	$3 / 3$ (at $0.2 V_{\text{CC}}$ to $0.8 V_{\text{CC}}$)
		$+2.5$ to $+3.3\text{V}$		$5 / 5$ (at $0.1 V_{\text{CC}}$ to $0.9 V_{\text{CC}}$)	$3 / 3$ (at $0.2 V_{\text{CC}}$ to $0.8 V_{\text{CC}}$)
Symmetry Min. to Max.			(%)	45 to 55	
Load (C_{L}) Max.			(pF)	15	
Start-up Time Max.			(ms)	4	
Standby function				Available (Three-state)	

■ Dimensions

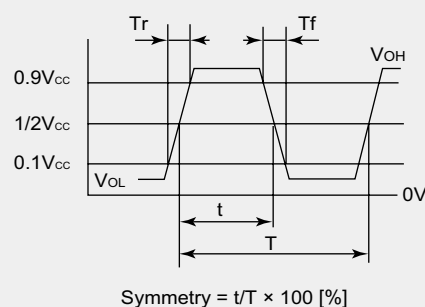


■ Standby Function

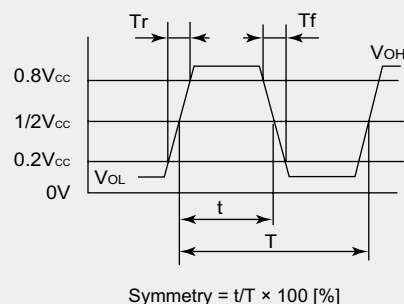
#1 Input	#3 Output
Level H (0.7 V _{CC} ≤ V _{IH} ≤ V _{CC}) or OPEN is selected.	Oscillation output ON
Level L (V _{IL} ≤ 0.3 V _{CC}) is selected.	High impedance

■ Output Waveform <CMOS>

Nominal Frequency Range : 1.5 ≤ F ≤ 80MHz



Nominal Frequency Range : 80 < F ≤ 125MHz



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■ Specification Number

Nominal Frequency Range : $1.5 \leq F \leq 80\text{MHz}$

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	NSC5072A	NSC5072B	NSC5072C	NSC5072D

Nominal Frequency Range : $80 < F \leq 125\text{MHz}$

Overall Frequency Tolerance	Operating Temperature Range (°C)	Supply Voltage (V)			
		+1.8±0.10	+2.5±0.25	+3.0±0.3	+3.3±0.33
±100×10 ⁻⁶	-40 to +125	NSC5166A	NSC5166B	NSC5166C	NSC5166AD

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

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