

Crystal Clock Oscillator

NZ2016SHA

For 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
- Supports a wide frequency range. (1.5 to 80MHz)
- Supports a wide temperature range from -40 to +125°C.
- Compact and light. Dimensions : 2.0 x 1.6 x 0.7 mm, weight : 0.01 g.
- Low phase jitter (Typ. 100fs (Frequency Offset : 12kHz to 20MHz)@80MHz, 3.3V)
- Output Specification : CMOS
- Taped units enable automatic mounting IR Reflow (lead free) is possible.
- Lead-free.
- Conforms to AEC-Q100/Q200.



Pb Free

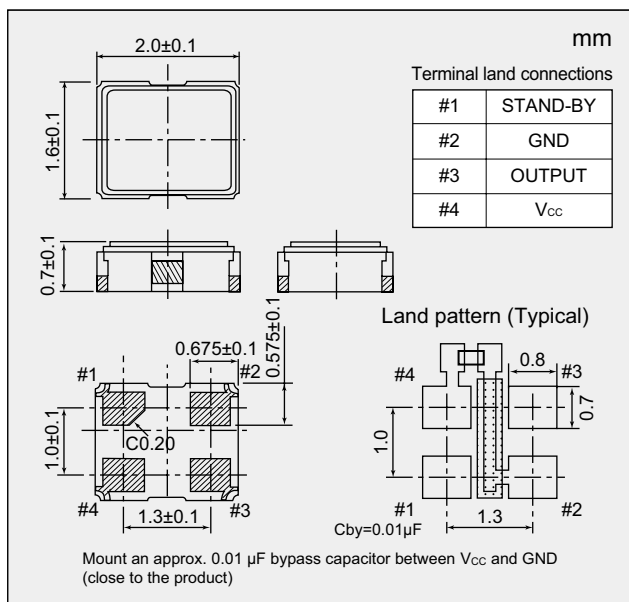
RoHS Compliant
Directive 2011/65/EU
Directive (EU) 2015/863

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

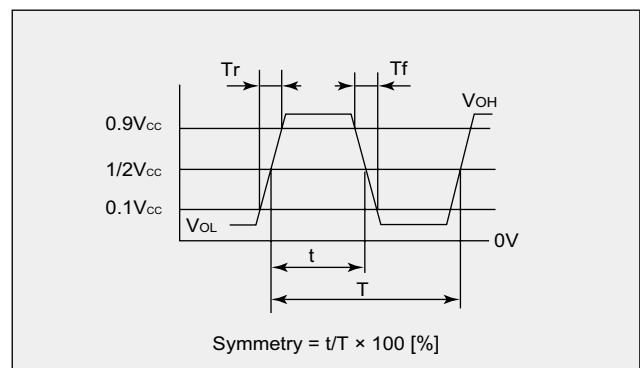
Specifications

Item		Model	NZ2016SHA
Output Specification			CMOS
Nominal Frequency Range		(MHz)	1.5 ≤ F ≤ 80
Overall Frequency Tolerance / Operating Temperature Range			±100×10 ⁻⁶ / -40 to +125 °C
			±50×10 ⁻⁶ / -40 to +105 °C
			±50×10 ⁻⁶ / -40 to +85 °C
Supply Voltage		(V)	+1.8 to +3.3
Current Consumption Max.	During Operation	+25 °C (mA)	2.5 to 9.0
	During Standby	+25 °C (μA)	20
V _{OL} Max. / V _{OH} Min.		(V)	0.1 V _{CC} / 0.9 V _{CC}
Tr Max. / Tf Max.		+1.8 V	6 / 6 (at 0.1 V _{CC} to 0.9 V _{CC})
		+2.5 to +3.3V	5 / 5 (at 0.1 V _{CC} to 0.9 V _{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



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	NSC5182A	NSC5182B	NSC5182C	NSC5182D
±50×10 ⁻⁶	-40 to +105	NSC5295A	NSC5295B	NSC5295C	NSC5295D
±50×10 ⁻⁶	-40 to +85	NSC5296A	NSC5296B	NSC5296C	NSC5296D

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