

Crystal Clock Oscillator

NEW

NDK
Crystal Bridge to the Future

NZ2016S Series

For OA, AV, and short-range wireless

■ Model name

NZ2016SA Overall frequency tolerance of $\pm 50 \times 10^{-6}$.



■ Application

- For mobile camera module, DVC, DSC, notebook PC, and PDA

Pb Free

RoHS Compliant
Directive 2011/65/EU

■ Features

- Ultra-compact and light. Dimensions : 2.0 x 1.6 x 0.7 mm, weight : 0.01 g.
- Supply voltage of +3.3 V ideal for low-power and power-saving type products.
- Seam sealing gives high reliability.
- Wide frequency range: 1.5 to 80 MHz.
- Automatic mounting by taping and IR reflow (lead-free) are possible.

Absolute maximum rating
Supply voltage (V_{CC}) –0.5 to +4.0 V
Storage temperature range –55 to +125 °C

■ Specifications

Item	Model										
Output level	CMOS										
Nominal frequency range ¹	(MHz) 1.5 ≤ F < 10 10 ≤ F < 20 20 ≤ F < 30 30 ≤ F < 40 40 ≤ F < 50 50 ≤ F < 60 60 ≤ F < 70 70 ≤ F ≤ 80										
Operating temperature range ²	(°C) –40 to +85										
Overall frequency tolerance	(×10 ⁻⁶) ±50										
Current consumption max	During operation	+3.3 V, 25 °C	(mA)	3.5	4.5	5.0	5.5	6.0	7.0	8.0	9.0
	During standby	+3.3 V, 25 °C	(μA)					10			
V_{OL} max/ V_{OH} min		(V)		0.1 V_{CC} /0.9 V_{CC}							
T_r max/ T_f max		(ns)		5/5							
Symmetry min. to max.		(%)		45 to 55							
Load (C_L) max		(pF)		15							
Start-up time max		(ms)		4							
Standby function				Available (Three-state)							

*1: If you require a product with a frequency not given above, please contact us.

*2: If you require a product with an operating temperature range not given above, please contact us.

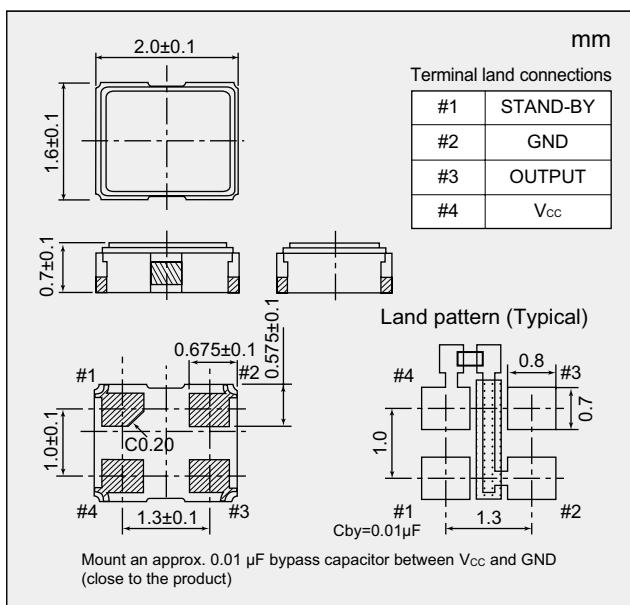
■ List of Codes for Placing an Order

List of Codes for Placing an Order	NSA3442F	
Supply voltage (V_{CC})	(V)	+3.3±0.33

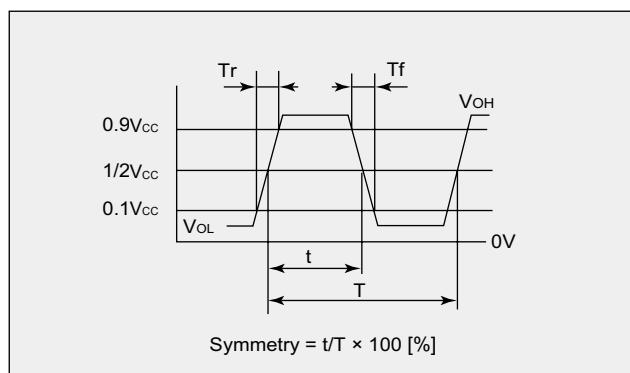
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■ Dimensions



■ 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

■ How to Specify an Order

When ordering our products, specify them with an "Ordering Code" that consists of the following:

Model name – Frequency (up to 9 digits) M – Number for specifying an order

Example : When ordering a product with model name: NZ2016SA, frequency: 20 MHz, and supply voltage: 3.3 V

Ordering Code: NZ2016SA – 20.000000M – NSA3442F

If you have any queries concerning our standard frequencies and numbers for specifying orders, please contact our sales representatives or visit our homepage (<http://www.ndk.com/>).