

# Crystal Clock Oscillator **NEW**

## NZ2016S Series

For OA, AV, and short-range wireless

### Model name

NZ2016SA Frequency stability of  $\pm 50 \times 10^{-6}$ .

### Application

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



Pb Free

RoHS Compliant  
Directive 2002/95/EC

### Features

- Ultra-compact and light. Dimensions and weight: 2.0 x 1.6 mm, 0.7 mm, and 0.01 g.
- Power 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  
Power supply voltage ( $V_{DD}$ )  $-0.5$  to  $+4.0$  V  
Storage temperature range  $-55$  to  $+125$  °C

### Specifications

Item	Model	NZ2016SA									
Output level		C-MOS									
Frequency range <sup>*1</sup>	(MHz)	$1.5 \leq F < 10$	$10 \leq F < 20$	$20 \leq F < 30$	$30 \leq F < 40$	$40 \leq F < 50$	$50 \leq F < 60$	$60 \leq F < 70$	$70 \leq F \leq 80$		
Operating temperature range <sup>*2</sup>	(°C)	-40 to +85									
Frequency Stability	( $\times 10^{-6}$ )	$\pm 50$									
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	( $\mu$ A)	10							
$V_{OL} \text{ max}/V_{OH} \text{ min}$	(V)	$0.1 V_{DD}/0.9 V_{DD}$									
$T_r \text{ max}/T_f \text{ max}$	(ns)	5/5									
Duty Cycle min. to max.	(%)	45 to 55									
Load ( $C_L$ ) max	(pF)	15									
Oscillation start time max	(ms)	4									
Standby function		Available (tristate)									

\*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.

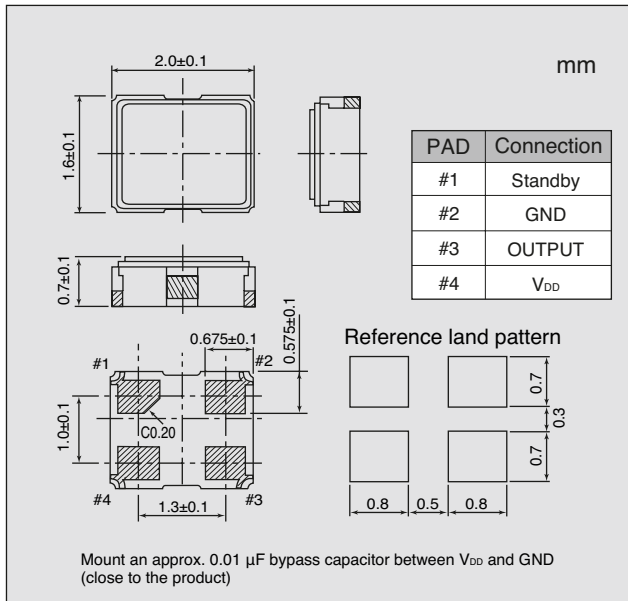
### List of Codes for Placing an Order

List of Codes for Placing an Order		NSA3442F
Power supply voltage [ $V_{DD}$ ]	(V)	+3.3 $\pm$ 0.33

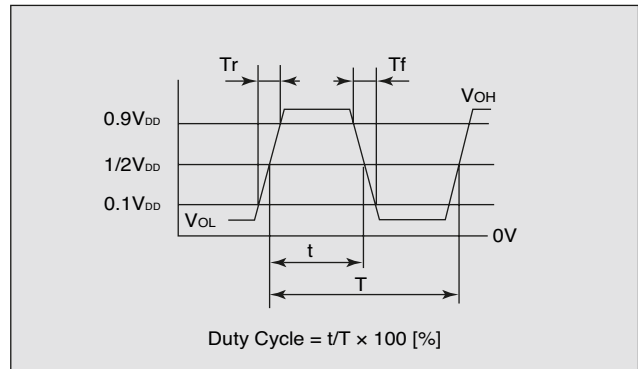
## NZ2016S Series

For OA, AV, and short-range wireless

### ■ Dimensions



### ■ Output Waveform <C-MOS>



### ■ Standby Function

#1 Input	#3 Output
Level H ( $0.7 V_{DD} \leq V_{IH} \leq V_{DD}$ ) or OPEN is selected.	Oscillation output ON
Level L ( $V_{IL} \leq 0.3 V_{DD}$ ) 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 power supply voltage: 3.3 V  
Ordering Code: NZ2016SA – 20.000M – 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/>).