

Crystal Clock Oscillator **NEW**

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	NZ2016SA							
Output level				CMOS							
Nominal frequency range ^{*1}		(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 ^{*2}		(°C)		-40 to $+85$							
Overall frequency tolerance		($\times 10^{-6}$)		± 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	(μ A)	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.

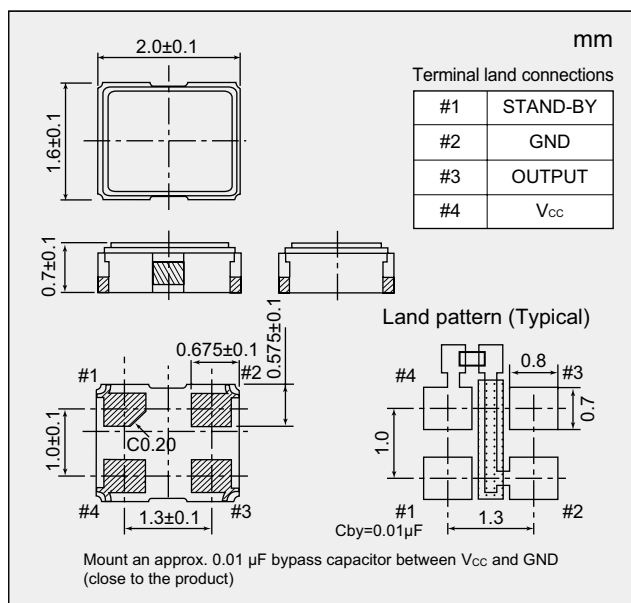
■ List of Codes for Placing an Order

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

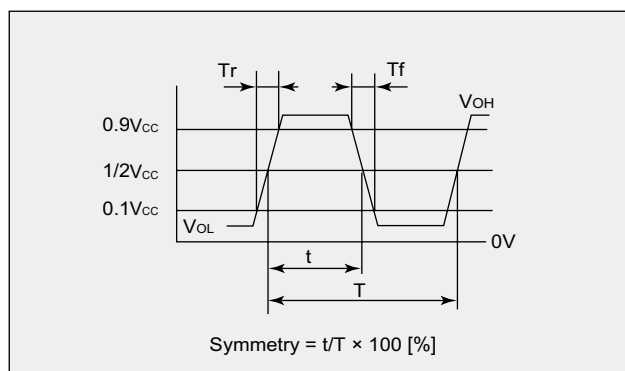
NZ2016S Series

For OA, AV, and short-range wireless

■ 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/>).