# Crystal Units

NX2016SA

For Automotive

■ Features

A small and thin surface-mount type crystal unit for automotive.

- Ultra compact and thin. (2.0 × 1.6 × 0.45 mm)
- Stable start-up characteristics even under extremely severe environmental conditions.
- Excellent environmental characteristics, including heat, vibration and shock resistance.
- Lead-free. Meets the requirements for re-flow profiling using lead-free solder.
- Conforms to AEC-Q200.

Pb Free

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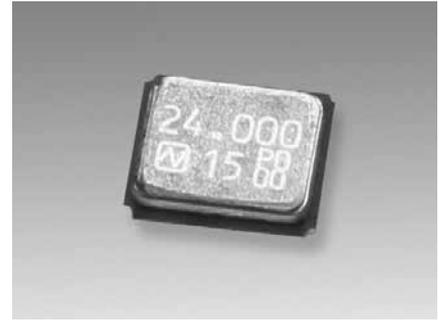
■ Specifications

Item \ Model	NX2016SA	
Standard	Standard	Optional
Nominal Frequency (MHz)	16 ≤ F ≤ 80	16 ≤ F ≤ 80
Overtone Order	Fundamental	Fundamental
Frequency Tolerance (25 ±3 °C)	$\pm 15 \times 10^{-6}$	$\pm 15 \times 10^{-6}$
Frequency versus Temperature Characteristics (with reference to +25 °C)	$\pm 50 \times 10^{-6}$	$\pm 50 \times 10^{-6}$
Operating Temperature Range (°C)	−40 to +125	−40 to +125
Storage Temperature Range (°C)	−40 to +125	−40 to +125
Equivalent Series Resistance	Refer to *1	Refer to *1
Level of Drive (µW)	10 (Max. 200)	10 (Max. 200)
Load Capacitance (pF)	8	6 to 18
Frequency Aging (+25°C)	---	Max. $\pm 3 \times 10^{-6}$ / year *2
Specifications Number	STD-CZS-3	Refer to *3

Please specify the model name,frequency,and specification number when you order products.
For futher questions regarding specifications, please feel free to contact us.
*2 If you have any other requests, NDK will study it.
*3 Ordering information: Overtone Order Fundamental / 3rd Overtone, the Operating Temperature Range, Frequency versus Temperature Characteristics, Frequency Tolerance, and Load Capacitance.

Ex. Model, Frequency (38.400000MHz 6digits), S1:Fundamental or S3:3rd Overtone
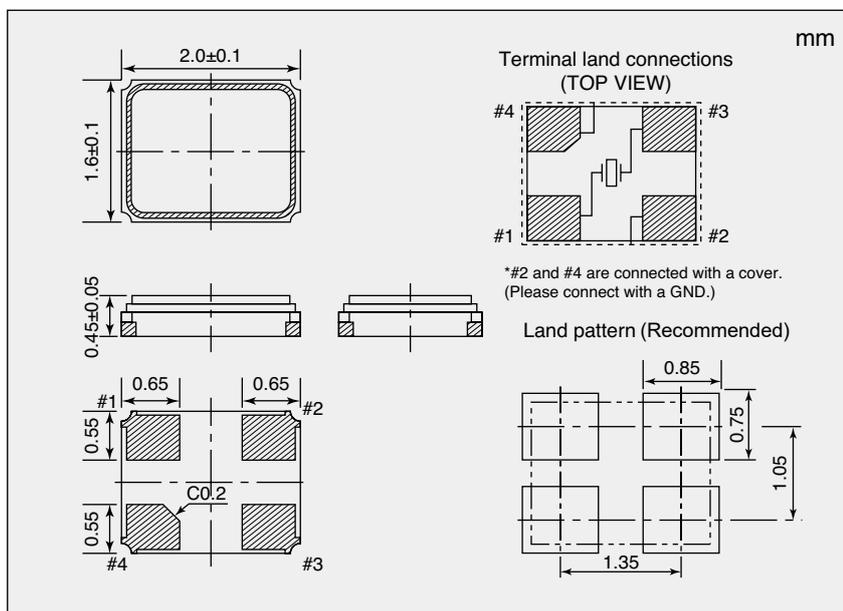- Operating Temperature Range (-40 to +125°C) - Frequency versus Temperature Characteristics ($\pm 50 \times 10^{-6}$)
- Frequency Tolerance ($\pm 15 \times 10^{-6}$) - Load Capacitance (7pF)
NX2016SA
38.400000MHz
S1-40125-50-15-7

■ Dimensions

mm

Terminal land connections (TOP VIEW)

*#2 and #4 are connected with a cover.
(Please connect with a GND.)

Land pattern (Recommended)

*1 Equivalent Series Resistance

Nominal Frequency (MHz)	Equivalent Series Resistance Max. (Ω)
16 ≤ F < 20	200
20 ≤ F < 24	100
24 ≤ F < 26	80
26 ≤ F < 40	60
40 ≤ F ≤ 80	50

If you have any other requests,NDK will study it.