# **Crystal Units**



## NX3225SA For OA / AV / Short-range Wireless

#### Features

A small surface-mount type crystal unit, especially suited for small-sizing requirements.

- Compact and thin. (3.2 × 2.5 × 0.55 mm typ.)
- •Excellent environmental characteristics, including heat and shock resistance.
- •Excellent electrical performance, ideal for OA (office automation), AV (audiovisual), Bluetooth and Wireless LAN applications.
- •Lead-free. Meets the requirements for re-flow profiling using lead-free solder.



Pb Free RoHS Compliant Directive 2011/65/EU

#### Specifications

Item Model	NX3225SA	
Nominal frequency	12 to 60 MHz	40 to 150 MHz
Overtone order	Fundamental	3rd overtone
Frequency tolerance (25 ±3 °C)	±15 × 10 <sup>-6</sup>	±20 × 10 <sup>-6</sup>
Frequency versus temperature characteristics (with reference to +25 °C)	±15 × 10 <sup>-6</sup>	
Operating temperature range	−10 to +75 °C	
Storage temperature range	-40 to +85 °C	
Equivalent series resistance	Refer to *1	
Level of drive	10 μW (Max. 200 μW)	
Load capacitance	8 pF	Series resonance

The above specifications are standard for this NDK product.

Custom-made specifications such as load capacitance and temperature characteristics are also available. Please contact NDK sales with your enquiries.

#### How to Specify an Order

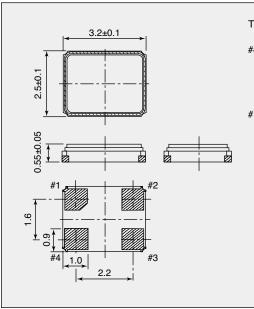
When ordering our products, specify them with an "Ordering Code" that consists of the following :

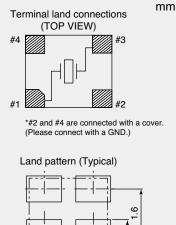
Model name - Frequency (Max : 9 digits) M - Number for specifying an order

Example NX3225SA-12.000M-STD-CSR-3

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/).

Dimensions





2.2

	*1	Equival	ent Series	Resistance
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Overtone Order	Nominal frequency (MHz)	Equivalent Series Resistance max. [Ω]
Fundamental	12 to 13	100
	13 to 20	80
	20 to 60	50
3rd overtone	40 to 100	140
	100 to 150	100

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