

# **NX5032GA**

## For Automotive

## **■** Features

A small surface-mount type crystal unit, ideal for Automotive.

Compatible with an engine control CPU clock delivering the high reliability that is particularly demanded, and compatible with low frequencies starting from 8 MHz.

- •Compact and thin. (5.0 × 3.2 × 1.3 mm typ.)
- •Stable start-up characteristic even under extremely severe environmental conditions.
- Excellent environmental characteristics, including heat, vibration and shock resistance.
- •Meets the requirements for re-flow profiling using lead-free solder.
- •Conforms to AEC-Q200.





## **■** Specifications

| Item Model                                                              | NX5032GA                |            |                                       |
|-------------------------------------------------------------------------|-------------------------|------------|---------------------------------------|
| Standard                                                                | Standard                |            | Optional                              |
| Nominal Frequency (MHz)                                                 | 8 to 10.499             | 10.5 to 40 | 8 to 40                               |
| Overtone Order                                                          | Fundamental             |            | Fundamental                           |
| Frequency Tolerance (25 ±3 °C)                                          | ±50 × 10 <sup>-6</sup>  |            | ±50 × 10 <sup>-6</sup>                |
| Frequency versus Temperature Characteristics (with reference to +25 °C) | ±150 × 10⁻ <sup>6</sup> |            | ±150 × 10⁻⁶                           |
| Operating Temperature Range (°C)                                        | -40 to +150             |            | -40 to +150                           |
| Storage Temperature Range (°C)                                          | -40 to +150             |            | -40 to +150                           |
| Equivalent Series Resistance                                            | Refer to *1             |            | Refer to *1                           |
| Level of Drive (µW)                                                     | 10 (Max. 500)           |            | 10 (Max. 500)                         |
| Load Capacitance (pF)                                                   | 8                       |            | 6 to 32                               |
| Frequency Aging (+25 °C)                                                |                         |            | Max. ±10 × 10 <sup>-6</sup> / year *2 |
| Specifications Number                                                   | STD-CSU-1               | STD-CSU-2  | Refer to *3                           |

Please specify the model name, frequency, and specification number when you order products.

For further questions regarding specifications, please feel free to contact us.

Ex. Model, Frequency (24.000000MHz 6digits), S1: Fundamental or S3: 3rd overtone

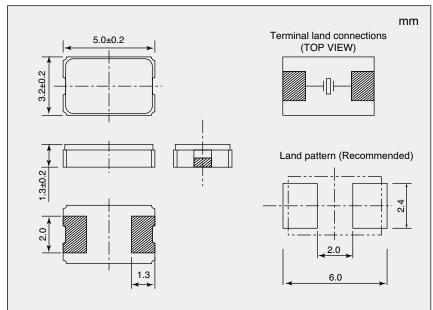
- Operating Temperature Range (-40 to +150°C) Frequency versus Temperature Characteristics (±150 × 10-6)
- Frequency Tolerance (±50 × 10<sup>-6</sup>) Load Capacitance (10pF)

NX5032GA

24.000000MHz

S1-40150-150-50-10

# **■** Dimensions



\*1 Equivalent Series Resistance

| Nominal Frequency<br>(MHz) | Equivalent Series<br>Resistance Max. (Ω) |
|----------------------------|------------------------------------------|
| 8 to 9.5                   | 300                                      |
| 9.5 to 10                  | 220                                      |
| 10 to 15                   | 150                                      |
| 15 to 20                   | 120                                      |
| 20 to 24                   | 100                                      |
| 24 to 30                   | 80                                       |
| 30 to 40                   | 50                                       |

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

<sup>\*2</sup> If you have any other requests, NDK will study it.

<sup>\*3</sup> Ordering information: Overtone Order Fundamental / 3rd Overtone, the Operating Temperature Range, Frequency versus Temperature Characteristics, Frequency Tolerance, and Load Capacitance.