# Crystal Units

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.

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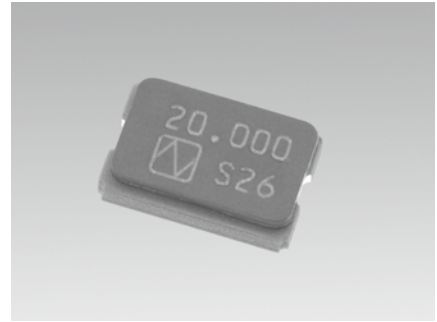
■ Specifications

Item \ Model	NX5032GA		
Standard	Standard		Optional
Nominal Frequency (MHz)	8 ≤ F < 10.5	10.5 ≤ F ≤ 40	8 ≤ F ≤ 40
Overtone Order	Fundamental		Fundamental
Frequency Tolerance (25 ±3 °C)	$\pm 50 \times 10^{-6}$		$\pm 50 \times 10^{-6}$
Frequency versus Temperature Characteristics (with reference to +25 °C)	$\pm 150 \times 10^{-6}$		$\pm 150 \times 10^{-6}$
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. $\pm 10 \times 10^{-6}$ / 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.

*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 (24.000000MHz 6digits), S1: Fundamental or S3 : 3rd overtone

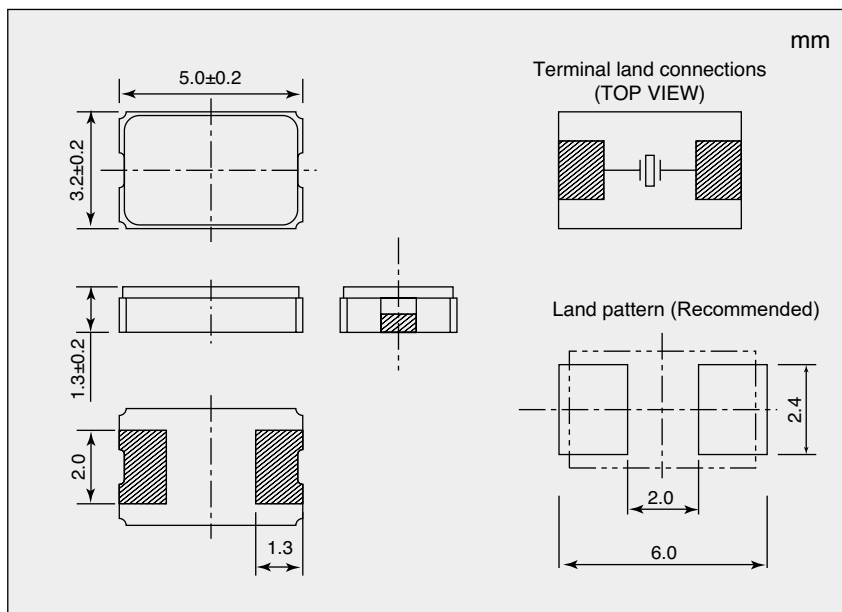　　– Operating Temperature Range (−40 to +150°C) − Frequency versus Temperature Characteristics ($\pm 150 \times 10^{-6}$)

　　− Frequency Tolerance ($\pm 50 \times 10^{-6}$) − Load Capacitance (10pF)

　NX5032GA

　24.000000MHz

　S1-40150-150-50-10

■ Dimensions

mm

Terminal land connections
(TOP VIEW)

Land pattern (Recommended)

5.0±0.2
3.2±0.2
1.3±0.2
2.0
1.3
2.4
2.0
6.0

*1 Equivalent Series Resistance

Nominal Frequency (MHz)	Equivalent Series Resistance Max. (Ω)
8 ≤ F < 9.5	300
9.5 ≤ F < 10	220
10 ≤ F < 15	150
15 ≤ F < 20	120
20 ≤ F < 24	100
24 ≤ F < 30	80
30 ≤ F ≤ 40	50

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