

## NX2520SG

For Mobile Communications

### ■ Features

- Crystal Unit with built-in Thermistor construction.
- Minimize circuit design space by combining crystal unit into one component.  
(Presently, Crystal unit and temperature sensor is mounted in one board separately.)
- Placing temperature sensor(Thermistor) close to Crystal blank in one airtight housing can detect more precise crystal blank temperature. Improvement on frequency temperature compensation compared to present Crystal unit.
- Single cavity housing which is ideal to module applications.
- Lead-free. Meets the requirements for re-flow profiling using lead-free solder.



Pb Free

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

### ■ Specifications

Item	Model	NX2520SG	
		Standard	Optional
Standard		Standard	Optional
Nominal Frequency (MHz)		$19.2 \leq F \leq 54$	$19.2 \leq F \leq 54$
Overtone Order		Fundamental	Fundamental
Frequency Tolerance ( $30 \pm 3^\circ\text{C}$ )		$\pm 10 \times 10^{-6}$	$\pm 10 \times 10^{-6}$
Frequency versus Temperature Characteristics (with reference to $+30^\circ\text{C}$ )		$\pm 12 \times 10^{-6}$	Please contact us about temp extended case, *1
Operating Temperature Range ( $^\circ\text{C}$ )		$-30$ to $+85$	Please contact us about temp extended case, *1
Storage Temperature Range ( $^\circ\text{C}$ )		$-40$ to $+105$	$-40$ to $+105$
Equivalent Series Resistance		Refer to *2	Refer to *2
Level of Drive ( $\mu\text{W}$ )		10 (Max. 100)	10 (Max. 100)
Load Capacitance (pF)		7	6 to 18
Frequency Aging ( $+25^\circ\text{C}$ )		---	Max. $\pm 3 \times 10^{-6}$ / year *1
Specifications Number		STD-CTX-1	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.

\*1 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

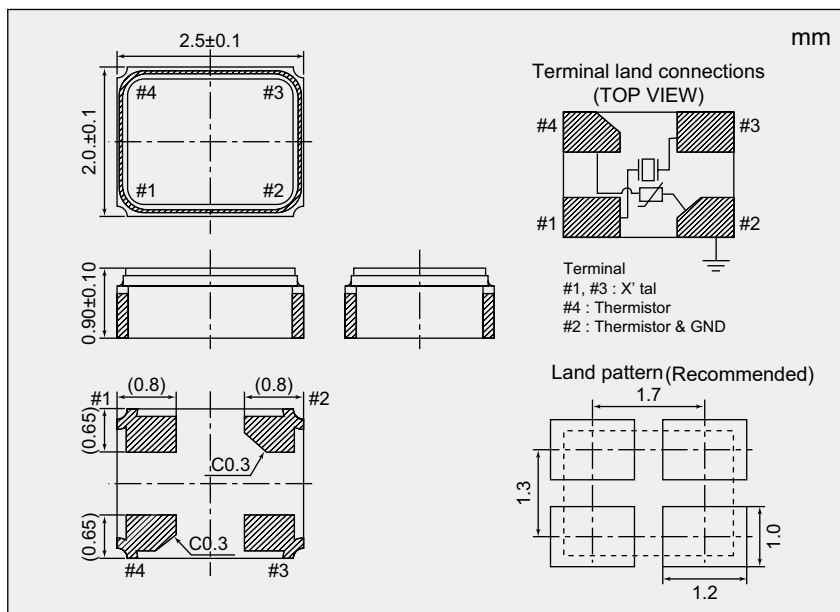
- Operating Temperature Range ( $-30$  to  $+85^\circ\text{C}$ ) - Frequency versus Temperature Characteristics ( $\pm 12 \times 10^{-6}$ )
- Frequency Tolerance ( $\pm 12 \times 10^{-6}$ ) - Load Capacitance (7pF)

NX2520SG

38.400000MHz

S1-3085-12-12-7

### ■ Dimensions



#### \*2 Equivalent Series Resistance

Nominal Frequency (MHz)	Equivalent Series Resistance Max. ( $\Omega$ )
$19.2 \leq F < 20$	70
$20 \leq F < 40$	50
$40 \leq F \leq 54$	40

#### NTC Thermistor for Temperature Sensor

Resistance (R25)	$100\text{k}\Omega \pm 1\%$
B-Constant (B25-50)	$4250\text{K} \pm 1\%$