

# CRYSTAL UNITS

## For Mobile Communication

### SURFACE MOUNT TYPE CRYSTAL UNITS / NX5032SA

This is highly precise small-sized surface-mounted crystal unit optimum for applications in mobile communications.

#### Features

- Compact and thin ( $5.0 \times 3.2 \times 0.75$  mm typ.).
- Standard Nominal Frequency for PLL-system are lined up.
- Excellent electrical characteristics and environmental performance for applications in mobile communications.
- Products are lead-free. These can meet the requirements of re-flow profiling using lead-free solder.
- RoHS compliant.



**RoHS Compliant**  
Directive 2002/95/EC

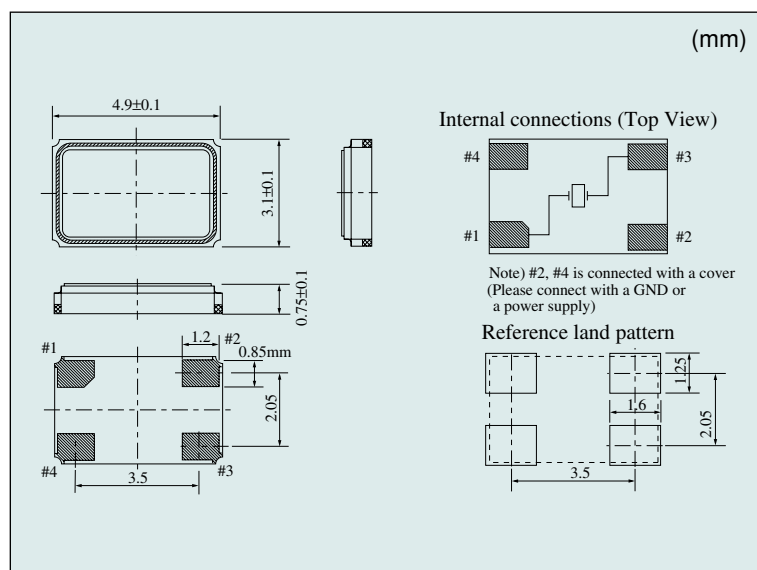
#### Specification

Item	Type	NX5032SA	
Frequency Range		12 ~ 39 MHz	
Overtone		Fundamental	
Frequency Tolerance (25±3°C)		± 10 × 10 <sup>-6</sup>	
Temperature Characteristics (in reference to +25°C)		± 10 × 10 <sup>-6</sup>	± 15 × 10 <sup>-6</sup>
Operating Temperature Range		-20 ~ +75°C	-30 ~ +85°C
Equivalent Series Resistance		40 Ω max	
Drive Level		10 μW (100 μW max)	
Standard Load Capacitance		10pF	
Operable Temperature Range		-40 ~ +85°C	

#### Typical Frequency (MHz)

Fundamental	12.0	12.6	12.8	13.0	14.31818	14.4	14.7456
	15.36	16.0	16.368	16.384	16.8	19.2	19.44
	19.5	19.68	19.8	20.0	21.25	24	24.5535
	24.576	25.0	26.0	27.0	32.0	40.0	44.0

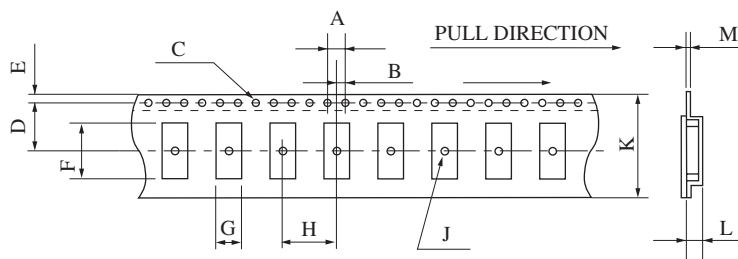
#### Dimensions



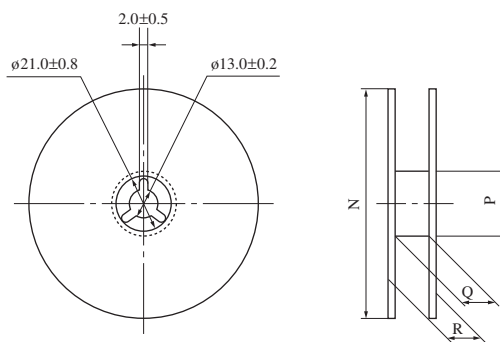
## TAPING DIMENSIONS

Below taping package is standard for surface mount type crystal units.

### ■ Tape



### ■ Reel



	NX1255GB/GC	NX8045GB/GD	NX6035SA	NX5032GA/GB/GC	NX5032SD	NX4025DA	NX3225SA/GA	NX2520SA	NX2016AA
A	4.0 ± 0.1	4.0 ± 0.1	4.0 ± 0.1	4.0 ± 0.1	4.0 ± 0.1	4.0 ± 0.1	4.0 ± 0.1	4.0 ± 0.1	4.0 ± 0.1
B	2.0 ± 0.1	2.0 ± 0.1	2.0 ± 0.1	2.0 ± 0.1	2.0 ± 0.1	2.0 ± 0.1	2.0 ± 0.1	2.0 ± 0.1	2.0 ± 0.1
C	ø 1.5 <sup>+0.1</sup> <sub>-0.1</sub>	ø 1.5 <sup>+0.1</sup> <sub>-0.1</sub>	ø 1.5 <sup>+0.1</sup> <sub>-0.1</sub>	ø 1.5 <sup>+0.1</sup> <sub>-0.1</sub>	ø 1.5 <sup>+0.1</sup> <sub>-0.1</sub>	ø 1.5 <sup>+0.1</sup> <sub>-0.1</sub>	ø 1.5 <sup>+0.1</sup> <sub>-0.1</sub>	ø 1.5 <sup>+0.1</sup> <sub>-0.1</sub>	ø 1.55 ± 0.05
D	11.5 ± 0.1	7.5 ± 0.1	7.5 ± 0.1	5.5 ± 0.1	5.5 ± 0.1	5.5 ± 0.1	3.5 ± 0.05	3.5 ± 0.05	3.5 ± 0.05
E	1.75 ± 0.1	1.75 ± 0.1	1.75 ± 0.1	1.75 ± 0.1	1.75 ± 0.1	1.75 ± 0.1	1.75 ± 0.1	1.75 ± 0.1	1.75 ± 0.1
F	12.2 <sup>+0.3</sup> <sub>-0.1</sub>	8.4 ± 0.1	6.55 ± 0.1	5.4 ± 0.1	5.4 ± 0.1	4.4 ± 0.1	3.5 ± 0.1	2.8 ± 0.1	2.25 ± 0.1
G	5.9 <sup>+0.3</sup> <sub>-0.1</sub>	4.8 ± 0.1	4.05 ± 0.1	3.5 ± 0.1	3.5 ± 0.1	2.9 ± 0.1	2.8 ± 0.1	2.3 ± 0.1	1.85 ± 0.1
H	12.0 ± 0.1	8.0 ± 0.1	8.0 ± 0.1	8.0 ± 0.1	8.0 ± 0.1	4.0 ± 0.1	4.0 ± 0.1	4.0 ± 0.1	4.0 ± 0.1
J	ø 2.1 ± 0.1	ø 1.5 ± 0.1	ø 1.6 ± 0.1	ø 1.5 <sup>+0.1</sup> <sub>-0.1</sub>	ø 1.6 ± 0.1	ø 1.5 ± 0.1	ø 1.15 ± 0.1	ø 1.05 ± 0.05	ø 1.05 ± 0.05
K	24.0 ± 0.2	16.0 ± 0.2	16.0 ± 0.3	12.0 ± 0.2	12.0 ± 0.2	12.0 ± 0.2	8.0 ± 0.2	8.0 ± 0.2	8.0 ± 0.2
L	3.0 ± 0.1 (* 2.4 ± 0.1)	2.0 ± 0.1	1.5 ± 0.1	1.4 ± 0.1	1.0 ± 0.1	0.8 ± 0.1	1.0 ± 0.1	0.75 ± 0.1	0.65 ± 0.1
M	0.3 ± 0.05	0.3 ± 0.05	0.3 ± 0.05	0.3 ± 0.05	0.25 ± 0.05	0.3 ± 0.05	0.25 ± 0.05	0.25 ± 0.05	0.25 ± 0.05
N	ø 330 ± 2	ø 330 ± 2	ø 330 ± 2	ø 180 <sup>+0</sup> <sub>-3</sub>	ø 330 ± 2	ø 180 <sup>+0</sup> <sub>-3</sub>	ø 180 <sup>+0</sup> <sub>-3</sub>	ø 180 <sup>+0</sup> <sub>-1.5</sub>	ø 180 <sup>+0</sup> <sub>-1.5</sub>
P	ø 80 ± 1	ø 100 ± 1	ø 80 ± 1	ø 60 <sup>+1</sup> <sub>-0</sub>	ø 100 ± 1	ø 60 <sup>+1</sup> <sub>-0</sub>	ø 60 <sup>+1</sup> <sub>-0</sub>	ø 60 <sup>+1</sup> <sub>-0</sub>	ø 60 <sup>+1</sup> <sub>-0</sub>
Q	25.5 ± 0.5	17.5 ± 0.5	17.5 ± 0.5	13.0 ± 0.3	13.5 ± 0.5	13.0 <sup>+0.3</sup> <sub>-0</sub>	9.0 <sup>+0.3</sup> <sub>-0</sub>	9.0 <sup>+0.3</sup> <sub>-0</sub>	9.0 <sup>+0.3</sup> <sub>-0</sub>
R	30.5 max	22.5 max	22.5 max	16.5 max	18.5 max	16.4 max	12.4 max	12.4 max	12.4 max
Quantity	1000	1000	2000	1000	5000	3000	3000	3000	3000

\* NX1255GC