

For OA•AV•Short-range Wireless **NEW**

SURFACE MOUNT TYPE CRYSTAL UNITS / NX3225SA

This is ultra small surface mount type crystal unit.

■ Features

- Ultra compact, thin and light weight (3.2×2.5×0.55 mm typ., 17mg typ.).
- Excellent heat resistance and environmental characteristics.
- Excellent electric performance optimum for OA (office automation), AV (audio & visual), Bluetooth and Wireless LAN applications are exhibited.
- Products are lead-free. These can meet the requirements of re-flow profiling using lead-free solder.



RoHS Compliant
Directive 2002/95/EC

■ Specification

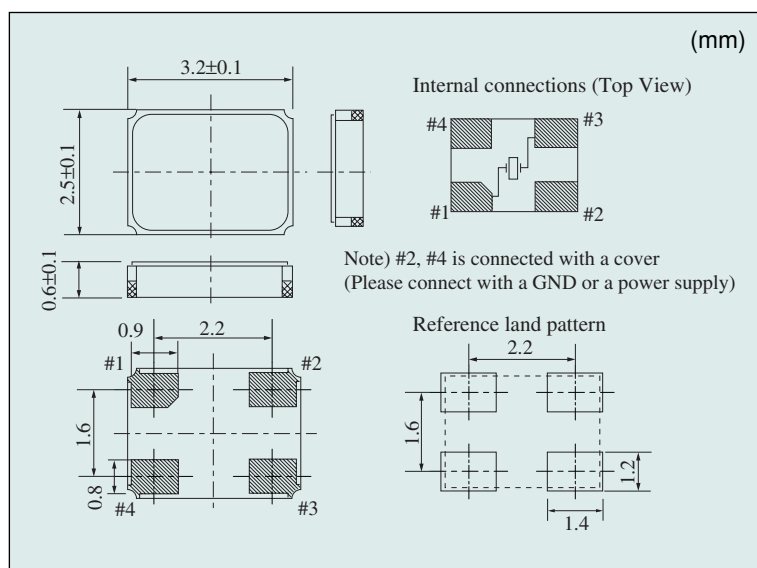
Item	Type	NX3225SA
Application		For Audio & Visual · Office Automation · Short-range Wireless
Frequency Range		12 ~ 55 MHz
Overtone		Fundamental
Frequency Tolerance (25±3°C)		± 15 ~ 50 × 10 ⁻⁶
Temperature Characteristics (in reference to +25°C)		± 15 ~ 50 × 10 ⁻⁶
Operating Temperature Range		- 10 ~ + 75°C
Equivalent Series Resistance		※ See table
Drive Level		50 μW (200 μW max)
Standard Load Capacitance		8 pF *1
Operable Temperature Range		- 40 ~ + 85°C

*1 indicates the typical Load Capacitance and other specifications are also available. Please contact NDK sales.

Typical Frequency (MHz)

AV/OA	12.0	12.288	13.0	13.56	14.31818	14.7456	15.36	16.0	16.384	16.9344	18.432
	20.0	20.48	20.5	22.0	22.592	24.0	24.576	25.0	25.4	26.0	27.0
	27.12	28.63636	30.0	32.0	33.8688	36.0	40.0	48.0	54.0		

■ Dimensions



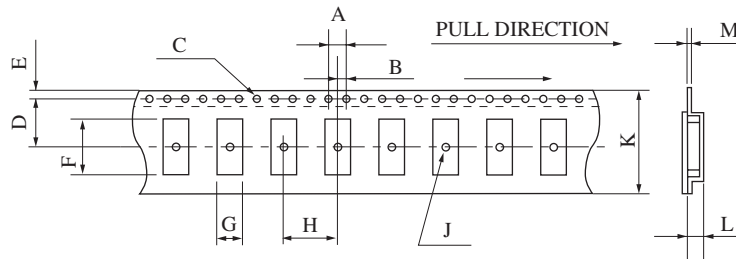
※ Table Equivalent Series Resistance (Ω)

Frequency Range (MHz)	Equivalent Series Resistance (Ω)
12 ~ 13	120 max
13 ~ 16	100 max
16 ~ 20	80 max
20 ~ 30	70 max
30 ~ 55	50 max

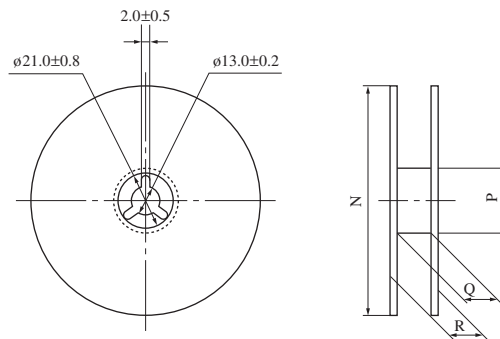
TAPING DIMENSIONS

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 ^{+0.1} ₋₀	ø 1.5 ^{+0.1} ₋₀	ø 1.5 ^{+0.1} ₋₀	ø 1.5 ^{+0.1} ₋₀	ø 1.5 ^{+0.1} ₋₀	ø 1.5 ^{+0.1} ₋₀	ø 1.5 ^{+0.1} ₋₀	ø 1.5 ^{+0.1} ₋₀	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 ^{+0.3} _{-0.1}	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 ^{+0.3} _{-0.1}	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 ^{+0.1} ₋₀	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 ⁺⁰ ₋₃	ø 330 ± 2	ø 180 ⁺⁰ ₋₃	ø 180 ⁺⁰ ₋₃	ø 180 ⁺⁰ _{-1.5}	ø 180 ⁺⁰ _{-1.5}
P	ø 80 ± 1	ø 100 ± 1	ø 80 ± 1	ø 60 ⁺¹ ₋₀	ø 100 ± 1	ø 60 ⁺¹ ₋₀	ø 60 ⁺¹ ₋₀	ø 60 ⁺¹ ₋₀	ø 60 ⁺¹ ₋₀
Q	25.5 ± 0.5	17.5 ± 0.5	17.5 ± 0.5	13.0 ± 0.3	13.5 ± 0.5	13.0 ^{+0.3} ₋₀	9.0 ^{+0.3} ₋₀	9.0 ^{+0.3} ₋₀	9.0 ^{+0.3} ₋₀
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