Specification of Quartz Crystal Units



| 1 | NDK Part Number | NX3215SA-32.768K-STD-MUA-8 |
|---|-----------------|----------------------------|
| | | |

2 **NDK Specification Number** STD-MUA-8 3 NX3215SA Type

4 **Electrical Characteristics**

4.1 Nominal Frequency (f_{nom}) 32.768 kHz

Fundamental 4.2 Overtone order

 $\pm 20 \times 10^{-6} \text{ max.} (+25 \,^{\circ}\text{C})$ 4.3 Frequency Tolerance **Turning Point** + 25°C ± 5°C 4.4

-0.04 x 10⁻⁶ / °C² max. 4.5 Temperature coefficient

70 kΩ max.Equivalent Series Resistance (R_r) 4.6

4.7 Shunt Capacitance (C_0) $1.0 \pm 0.5 pF$ Motional capacitance (C₁) 4.0 ± 2.0 fF 4.8

4.9 Maximum Drive Level 0.5 µW max.

Measurement Circuit 5

Frequency Measurement 5.1

5.1.1 Measuring Instrument Network Analyzer (CNA-LF made in Transat corp.)

12.5 pF 5.1.2 Load Capacitance (C_L) 0.1 µW 5.1.3 Level of Drive

5.2 **Equivalent Resistance Measurement**

5.2.1 Measuring Instrument Network Analyzer (CNA-LF made in Transat corp.)

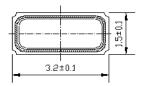
5.2.2 Load Capacitance (C_L) Series 5.2.3 Level of Drive $0.1 \,\mu W$

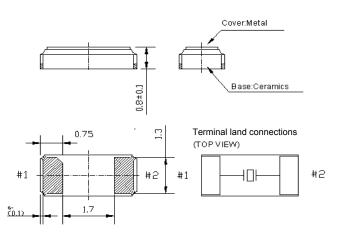
Operable Temperature Range -40 ~ +85 °C -40 ~ +85 °C 7 Storage Temperature Range

± 3 ×10⁻⁶ Max. / 1 year 8 Aging (at +25 °C)

9 Dimension

(Unit: mm)





Recommended soldering pattern

