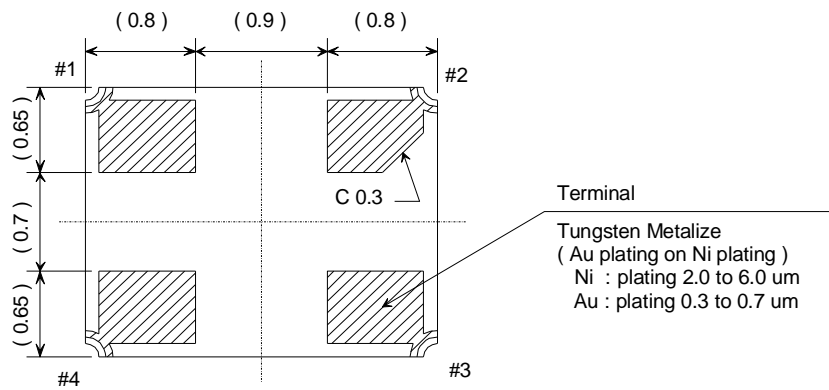
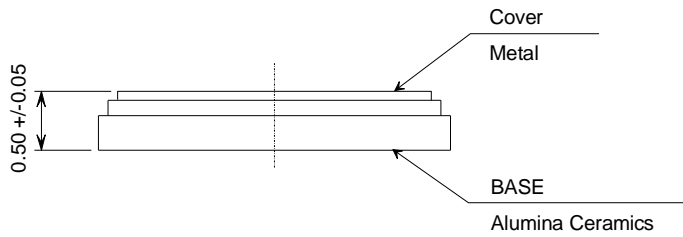
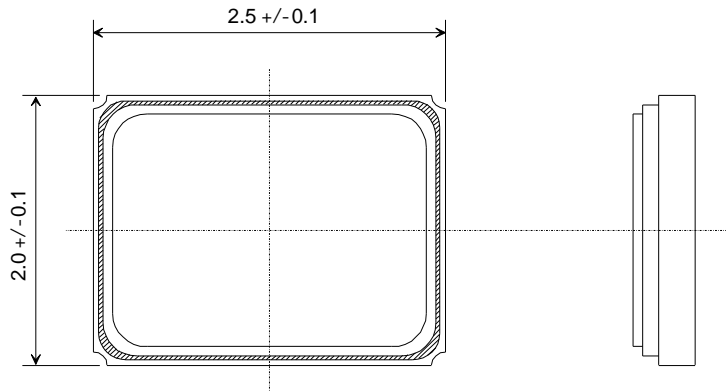
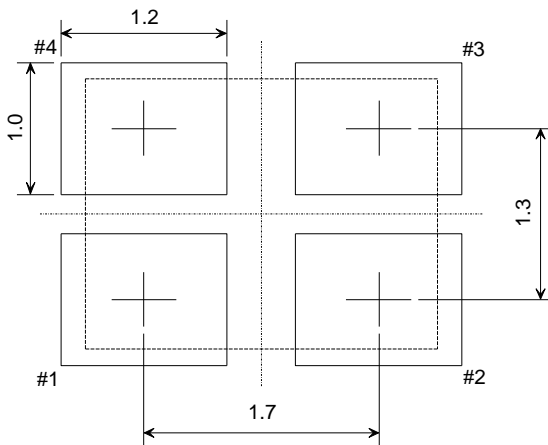


SPECIFICATION

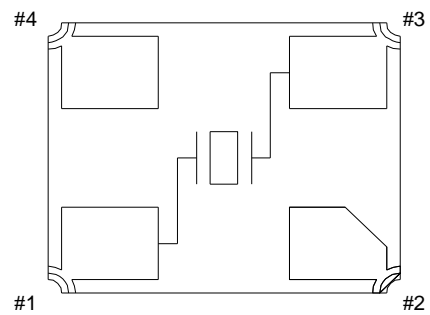
1. Customer specifications number :
2. NDK specification number :
3. Type : NX2520SD
4. Electrical characteristics
 - 4.1. Nominal Frequency (F_0) : 24.000 MHz
 - 4.2. Overtone Order : Fundamental
 - 4.3. Adjustment Tolerance : $\pm 15 \times 10^{-6}$ Max. (at 25 °C)
 - 4.4. Frequency stability over temperature : $\pm 15 \times 10^{-6}$ Max. (at -30 to +85°C)
The reference temp. shall be +25 °C
 - 4.5. Equivalent Resistance (R_R) : 50 Ω Max.
 - 4.6. Shunt capacitance (C_0) : 0.5 to 0.9 pF (Not grounded)
 - 4.7. Motional capacitance (C_1) : 1.7 to 2.5 fF (Not grounded)
 - 4.8. Insulation Resistance : Terminal to terminal insulation resistance also terminal to cover insulation resistance must be 500M Ω (Min.) when DC100V ± 15 V is applied.
5. Measurement circuit
 - 5.1. Frequency measurement
 - Measuring Instrument : IEC π -network
 - Load Capacitance (C_L) : 12 pF
 - Level of Drive : 10 μ W
 - 5.2. Equivalent resistance measurement
 - Measuring Instrument : IEC π -network
 - Load Capacitance (C_L) : Series
 - Level of Drive : 10 μ W
6. Other performances
 - 6.1. Air-tightness : Less than 1.1×10^{-9} Pa m³/s (Helium leak detector)
 - 6.2. Operating Temperature range : -30 to +85 °C
 - 6.3. Storage Temperature range : -40 to +85 °C
 - 6.4. Ageing : $\pm 5 \times 10^{-6}$ max. within 5 years at +25°C ± 2 °C
 - 6.5. Maximum drive level : 200 μ W Max.



[Top view] Land pattern (Typical)



Top view
PIN Connection



Terminal #1 and #3 : Xtal
Terminal #2 and #4 : GND (Connection Cover)