

# TAS-3225D

## Miniature Surface Mount Type Crystal Units

### ■Feature

Small size area with reduced height (3.2×2.5, 0.55±0.05). Hermetic sealing by Au-Sn method. Part is preconditioned to temperatures well beyond lead free reflow for unsurpassed reliability. Frequency starting from 13MHz. Extremely well suited for all Cellular Phones, NFC, Bluetooth, WLAN, DBV-H and Zigbee where small size is important. Product is lead free in construction. Can be mounted to PCB using a lead free solder reflow process.

Now printing

### ■Standard Specifications

Size (mm)	3.2×2.5, 0.60t max.
Overtone Order	Fundamental
Frequency Range (MHz)	13 ~ 60 (See Table 1)
Equivalent Series Resistance (Ω)	120 max.
Drive Level (μW)	30, 50
Operating Temperature Range	See Table 2
Frequency Temperature Characteristics (in reference to 25 °C)	See Table 2

■Table 1 Typical Frequencies

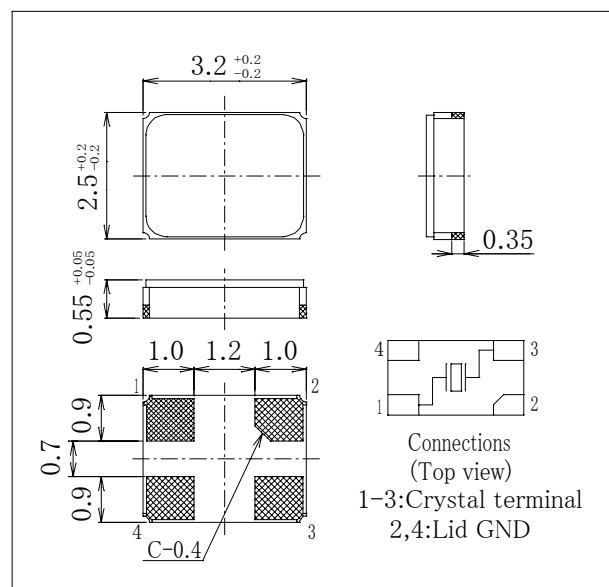
Frequency (MHz)	
13.000	14.400
16.000	19.200
19.680	19.800
24.000	26.000
32.000	36.000
40.000	44.000

■Table 2 Frequency Temperature Characteristics

Temperature Range	Temperature Characteristics(×10 <sup>-6</sup> )	Frequency Tolerance(×10 <sup>-6</sup> )
-10 ~ 60 °C	±5	±10 ~ ±50 (25 °C ± 3°C)
-20 ~ 70 °C	±10	
-30 ~ 85 °C	±15	

\* Products with specific requirements are available request.

### ■Outline Dimensions



### ■Reference Land Pattern

