

Package : TSS-3225A

Miniature Surface Mount Crystal

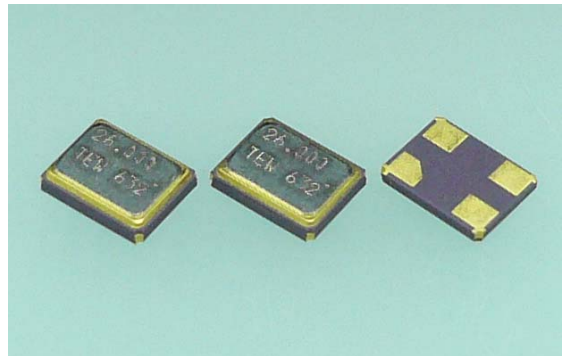
■ Feature

- Standardized 3.2×2.5mm package.
- Hermetic sealing by seam welding.
- Superior mechanical shock and vibration resistance.
- RoHS compliant - Lead Free

■ Applications Cellular Phones,Bluetooth,WLAN, Zigbee

■ Standard Specifications

Characteristic	Value
Size (mm)	3.2×2.5, 0.70t±0.1t
Overtone Order	Fundamental
Frequency Range (MHz)	14.4 to 60 (See Table 1)
Equivalent Series Resistance (Ω)	60max. to 150max.
Drive Level (μWatts)	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) - ESR	
14.7456[ESR=150 Ω max]	16.000[ESR=100 Ω max]
19.200[ESR=80 Ω max]	19.680[ESR=80 Ω max]
19.800[ESR=80 Ω max]	24.000[ESR=60 Ω max]
26.000[ESR=60 Ω max]	32.000[ESR=60 Ω max]
36.000[ESR=60 Ω max]	38.400[ESR=60 Ω max]
40.000[ESR=60 Ω max]	44.000[ESR=60 Ω max]

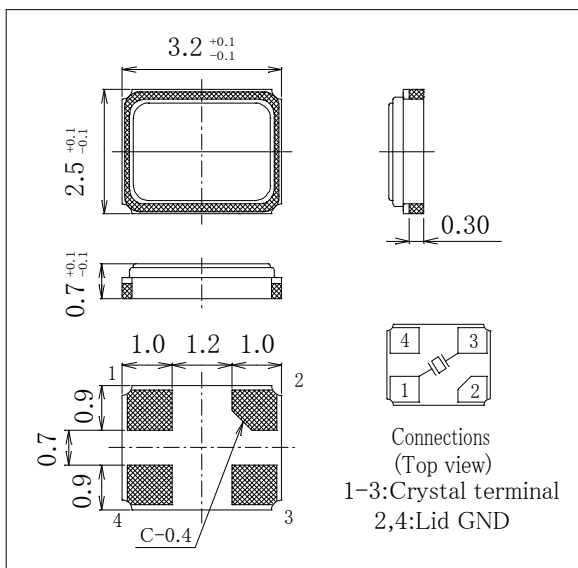
■ Table 2 Frequency vs. Temperature Characteristics

Temperature Range	Stability(ppm)	Frequency Tolerance(ppm@25°C)
-10 to 60 °C	±5 max.	±10 max., ±20 max. (25 °C ± 3°C)
-20 to 70 °C	±10 max.	
-30 to 85 °C	±15 max.	

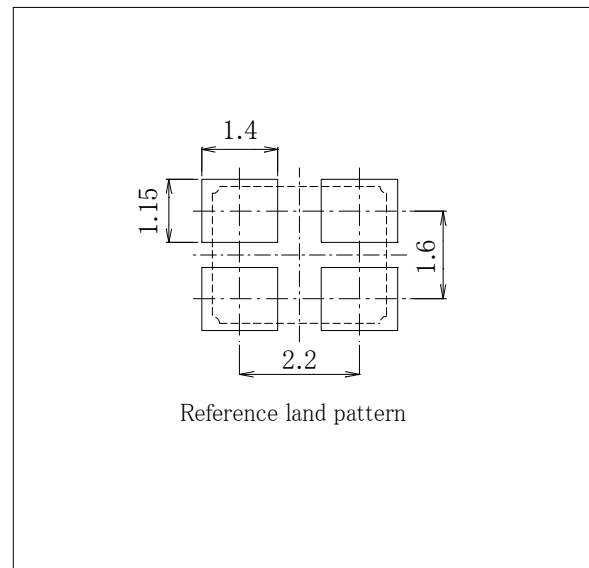
Note :

Modified specifications are available upon request for specific applications.

■ Outline Dimensions



■ Reference Land Pattern



The ordering number will be obtained separately by customer's requirement.



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Specifications subject to change without notice. Jan / 2011