

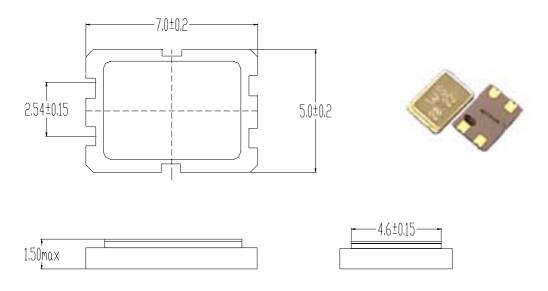
## 1. SCOPE

This specification shall cover the characteristics of crystal unit with SMD0705-10.00—27.00MHz

### 2. ELECTRICAL SPECIFICATION

ITEM	SPECIFICATION
HOLDER TYPE	SMD0705
NOMINAL FREQUENCY	10.00—27.00MHz
LOAD CAPACITANCE	10PF to series
OSCILLATION MODE	Fundamental
FREQUENCY TOLERANCE AT $25^{\circ}\text{C} \pm 2^{\circ}\text{C}$	$\pm 30$ PPM
EQUIVALENT SERIES RESISTANCE	40 Ω max.
DRIVE LEVEL	0.5MW
OPERATING TEMPERATURE RANGE	-10℃~+60℃
FREQUENCY STABILITY	$\pm 30$ PPM
SHUNT CAPACITANCE	<7PF
AGING	$\pm$ 5PPM/YEAR
INSULATION RESISTANCE	$>$ 500M $\Omega$ at DC 100V

# 3. Dimension (mm)



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### 4. MECHANICAL SPECIFICATION

1) Terminal Strength

Lead pulling test

Conditions: Load 907.2 gram

Direction To the downward

Duration of applied force 5 seconds

Results: There should be no distortion in appearance.

Lead bending test

Conditions: Load 453.6 gram

Bending angle 90° to normal position Rate of bending 3 seconds in each cycle

Number of bending 3

Results: There should be no distortion in appearance.

2) Lead solderability test

Conditions: Dipping in solder( $+230^{\circ}\text{C} \pm 5^{\circ}\text{C}$ ) for 5 seconds Results: More than 95% of surface being tested should be

coated uniformly with solder.

3) Vibration test

Conditions: Frequency 10 - 55Hz

Amplitude 0.762mm Sweep 1.0 minute Duration 2 hours

Results: Frequency and wave form of tested products must

Remain within specifications.

4) Drop test

Conditions: Method of drop Natural drop

Dropping floor Hard wood board

Height 30cm Number of drops 3 times

Results: Frequency and wave form of tested products must

remain within specifications.

#### 5. ENVIRONMENTAL SPECIFICATION

1) Temperature test

\* Temperature cycling test

Conditions: Steps of cycle 1) At  $-55^{\circ}$ C,30 minutes

2) At  $+25^{\circ}$ C, 10 - 15 minutes 3) At  $+85^{\circ}$ C, 30 minutes 4) At  $+25^{\circ}$ C, 10 - 15 minutes

Number of cycles 3 times

Results: Frequency and wave form of tested products must

remain within specifications.

\* Low Temperature test

Conditions: Temperature  $-20^{\circ}\text{C} \pm 2^{\circ}\text{C}$ 

Length of test 96 hours

Results: There should be no stain on surface of products.

Frequency and wave form of tested products must

remain within specifications.

2) Aging test

Conditions: Temperature  $+85^{\circ}\text{C} \pm 20^{\circ}\text{C}$ 

Length of test 96 hours

Results: Deviation of frequency must be less than  $\pm 3$ ppm

3) Salt spray test

Conditions: Temperature  $+35^{\circ}\text{C} \pm 2^{\circ}\text{C}$ 

Length of test 48 hours

NaCI % 5%

Results: There should be no stain on surface of products.

4) Humidity test

Conditions: Temperature  $+40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ 

Relative humidity 90 - 95% Length of test 96 hours

Results: a. Insulation resistance must be 500 M  $\Omega$ /100 Vac. minimum

b. Resistance and wave form must remain within specifications.