

CRYSTAL UNIT

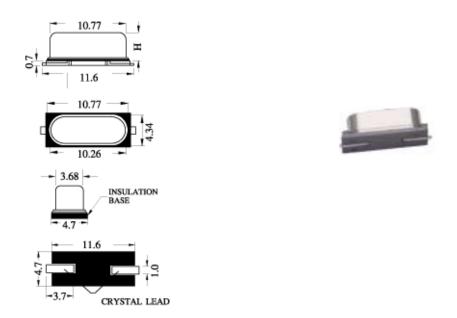
1. SCOPE

This specification shall cover the characteristics of crystal unit with HC-49/S SMD 3.579545—27.00MHz

2. ELECTRICAL SPECIFICATION

ITEM	SPECIFICATION
HOLDER TYPE	HC-49/S SMD
NOMINAL FREQUENCY	3.579545—27.00MHz
LOAD CAPACITANCE	10PF to series
OSCILLATION MODE	Fundamental
FREQUENCY TOLERANCE AT $25^{\circ}\text{C} \pm 2^{\circ}\text{C}$	± 30 PPM
EQUIVALENT SERIES RESISTANCE	Based on frequency
DRIVE LEVEL	0.5MW
OPERATING TEMPERATURE RANGE	-10°C~+60°C
FREQUENCY STABILITY	± 30 PPM
SHUNT CAPACITANCE	7PF max
AGING	\pm 5PPM/YEAR
INSULATION RESISTANCE	$>$ 500M Ω at DC 100V

3. Dimension (mm)



H=4.0mm

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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° 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 ± 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 Ω /100 Vac. minimum

b. Resistance and wave form must remain within specifications.