

soberton inc.

PIEZOELECTRIC
SMD
BUZZER

Acoustic Product Specification

Product Number: ST-09T



Release | Revision: A/2026

CONTENTS

This document contains the technical specifications for the Piezoelectric SMD buzzer.

Page 1
Specifications

Dimensions

Page 2
Reliability Test

Page 3
Testing Method

Typical Frequency Response Curve

Page 4

Soldering Condition

Page 5
Packing

Specifications

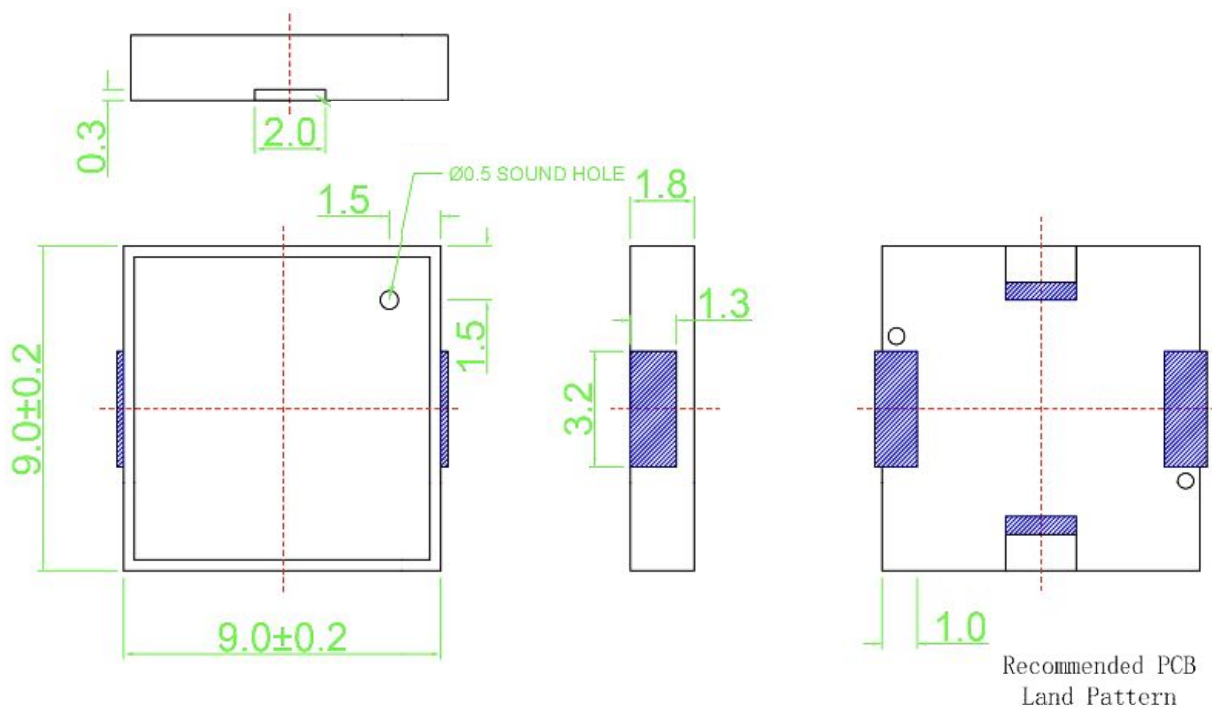
Item	Unit	Specification	Condition
Oscillation Frequency	Hz	4000±500	
Operating Voltage	Vp-p	1 ~ 25	
Rated Voltage	Vp-p	5.0	
Current Consumption	mA	Max. 4.5	at Rated Voltage
Sound Pressure Level	dB	Min. 70	at 10cm at Rated Voltage
Electrostatic Capacity	pF	12000±30%	
Operating Temperature	°C	-20 ~ +70	
Storage Temperature	°C	-30 ~ +80	
Dimensions	mm	9.0 × 9.0 ×H1.8	
Weight	gram	0.3	
Housing Material		Nylon (Black)	
Leading Pin		Tin Plated Brass (Sn)	
Terminal		SMD	
Environmental Protection Regulation		RoHS 2.0	

Measuring Condition:

Temperature: 5~35°C Humidity: 45%~85%R.H Atmospheric Pressure: 860 ~1060hPa

Dimensions

Unit: mm
Tolerance: ±0.5mm, except where specified



Housing Material: Nylon (Black)
Terminal Plate: 2 Soldering Pads, Tin Plating Brass



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Specifications

Dimensions

Page 2
Reliability Test

Page 3
Testing Method

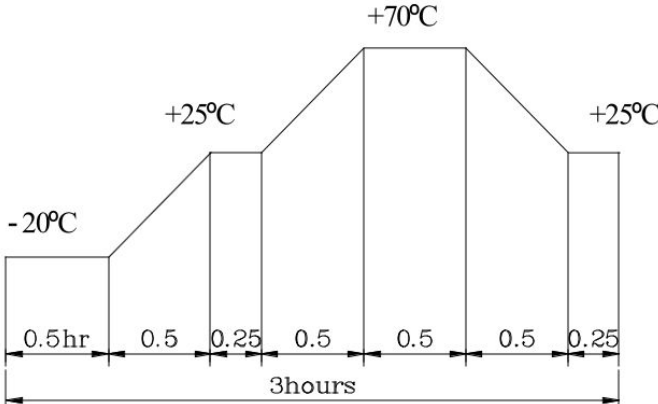
Typical Frequency Response
Curve

Page 4

Soldering Condition

Page 5
Packing

Reliability Test

Item	Test condition
High Temperature Test (Storage)	After being placed in a chamber with 80±2°C for 96 hours and then being placed in normal condition for 2 hours. Allowable variation of SPL after test: ±10dB.
Low Temperature Test (Storage)	After being placed in a chamber with -30±2°C for 96 hours and then being placed in normal condition for 2 hours. Allowable variation of SPL after test: ±10dB.
Humidity Test	After being placed in a chamber with 90-95% R.H. at 40±2°C for 96 hours and then being placed in normal condition for 2 hours. Allowable variation of SPL after test:±10dB.
Temperature Cycle Test	The part shall be subjected to 5 cycles. One cycle shall consist of: 
Drop Test	Drop on a hardwood board of 4cm thick, 6 times, at a height of 75cm. Allowable variation of SPL after test: ±10dB.
Vibration Test	Apply a vibration at an amplitude of 1.5mm with 10 to 55 Hz frequency to each of 3 perpendicular directions for 2 hours . Allowable variation of SPL after test: ±10dB.
Solderability Test	Lead terminals are immersed in rosin for 5 seconds and then immersed in solder bath of +300±5°C for 3±1 seconds. 90% min. lead terminals shall be wet with solder (Except the edge of terminals).
Terminal Strength Pulling Test	The force of 9.8N(1.0kg) is applied to each terminal in axial direction for 10 seconds. No visible damage.
Standard Test Condition	a) Temperature : +5 ~ +35°C b) Humidity : 45-85% c) Pressure : 860-1060 mbar



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Page 1
Specifications

Dimensions

Page 2
Reliability Test

Page 3
Testing Method

Typical Frequency Response Curve

Page 4

Soldering Condition

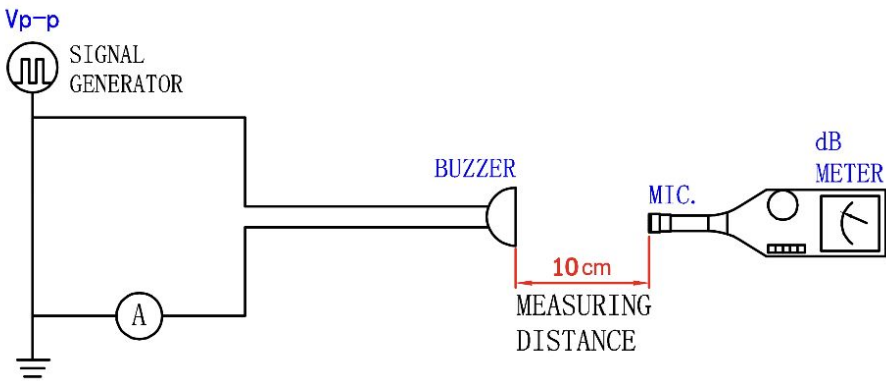
Page 5
Packing

Testing Method

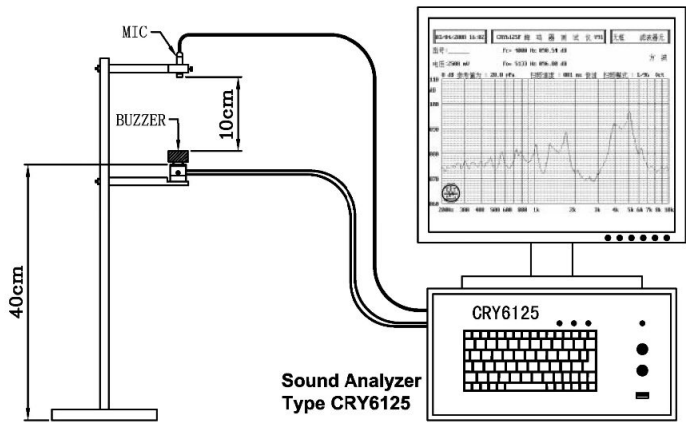
Acoustic Characteristics:

The oscillation frequency, current consumption and sound pressure are measured by the measuring instruments shown below;

Recommended Driving Circuit



In the measuring test, buzzer is placed as follows:

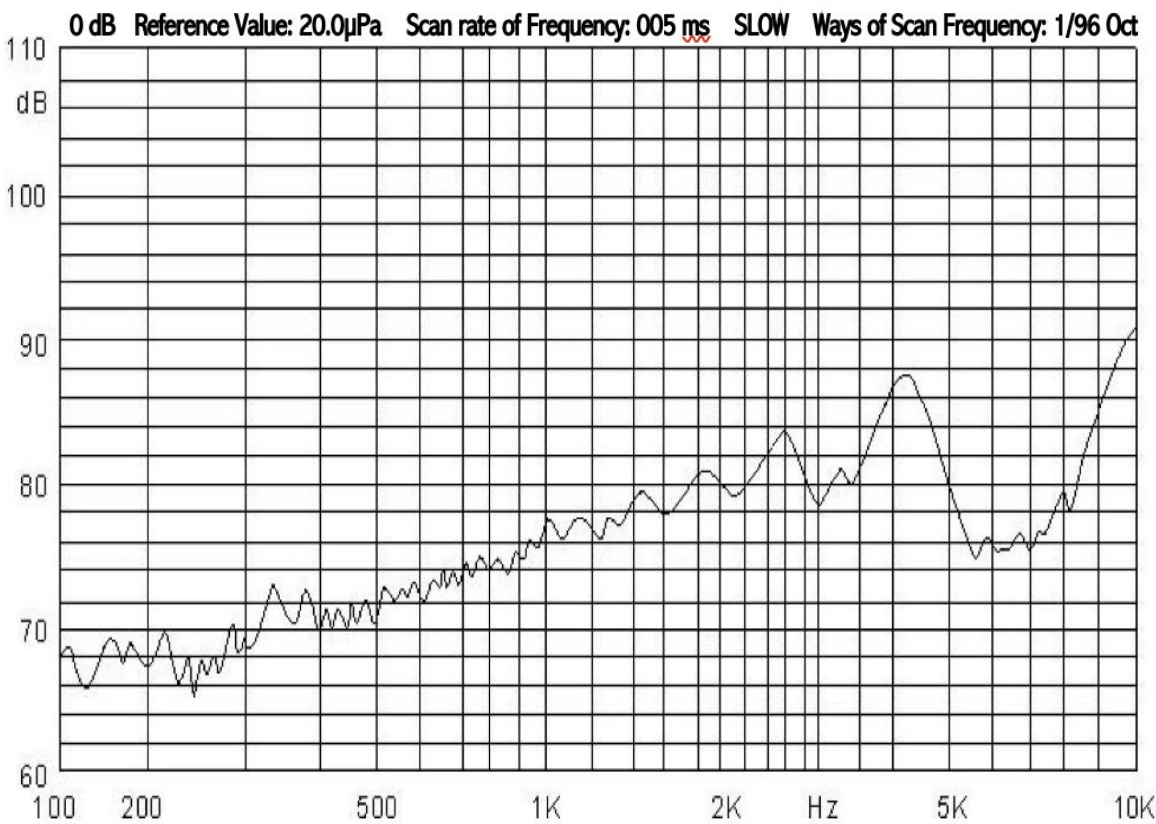


Standard Measurement Conditions:

Temperature: 25±2°C Humidity: 45 ~ 65%

Typical Frequency Response Curve

5 Vp-p, 50% duty cycle, square wave, 10cm





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Page 1
Specifications

Dimensions

Page 2
Reliability Test

Page 3
Testing Method

Typical Frequency Response
Curve

Page 4

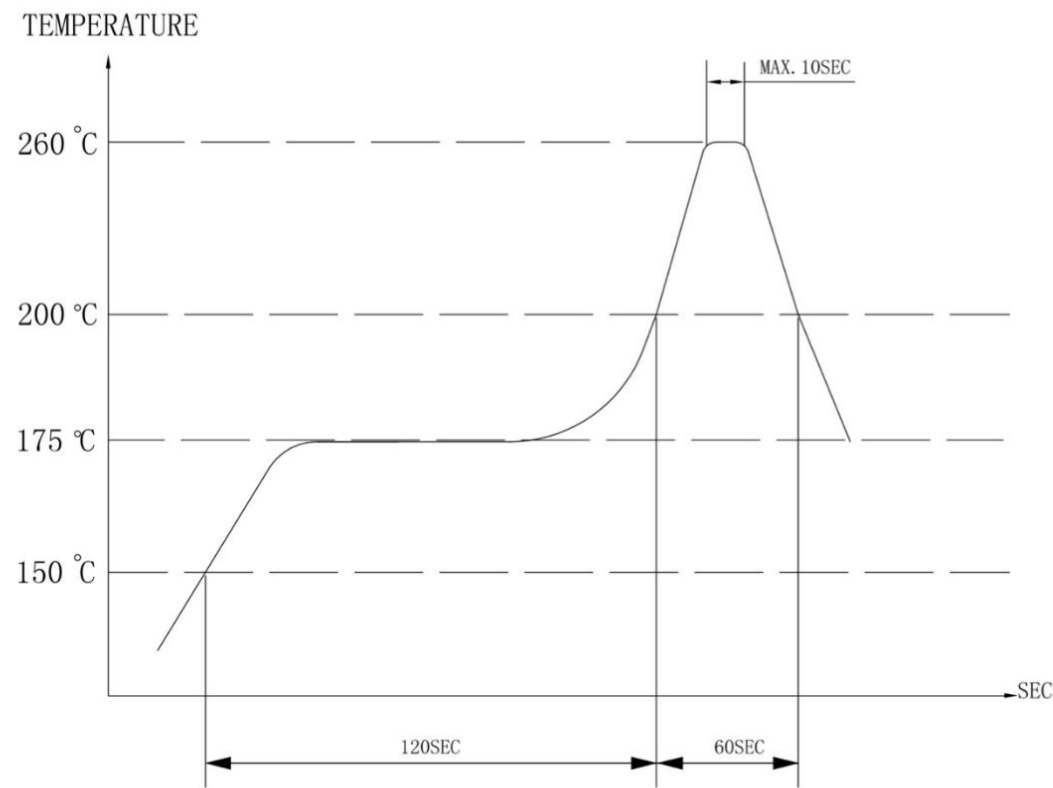
Soldering Condition

Page 5
Packing

Soldering Condition

Recommended reflow soldering condition is as follows;

- 1. Reflow soldering is 2-step.
It is requested that reflow soldering should be executed after heat of product goes down to normal.
- 2. Manual soldering: Manual soldering temperature at 350°C within 5 sec.



Heat resistant line (Used when heat resistant reliability test is performed)



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Page 1
Specifications

Dimensions

Page 2
Reliability Test

Page 3
Testing Method

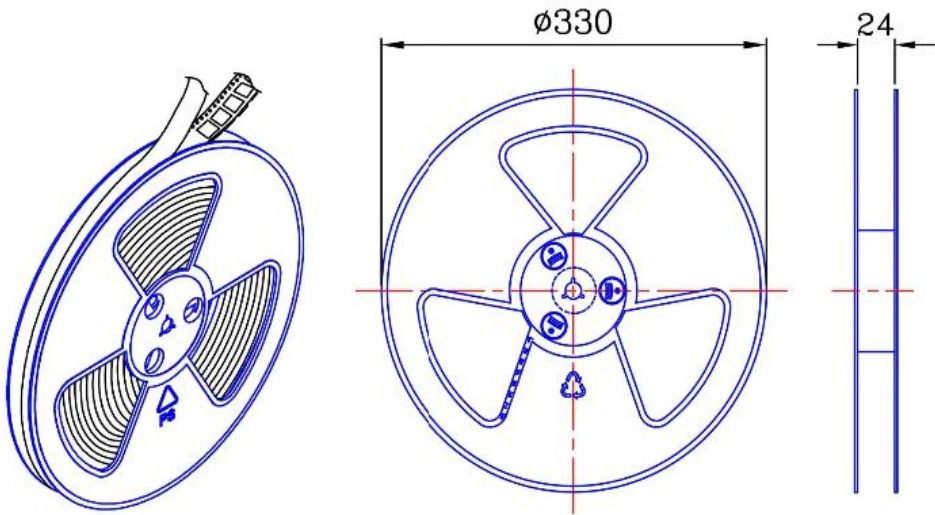
Typical Frequency Response
Curve

Page 4

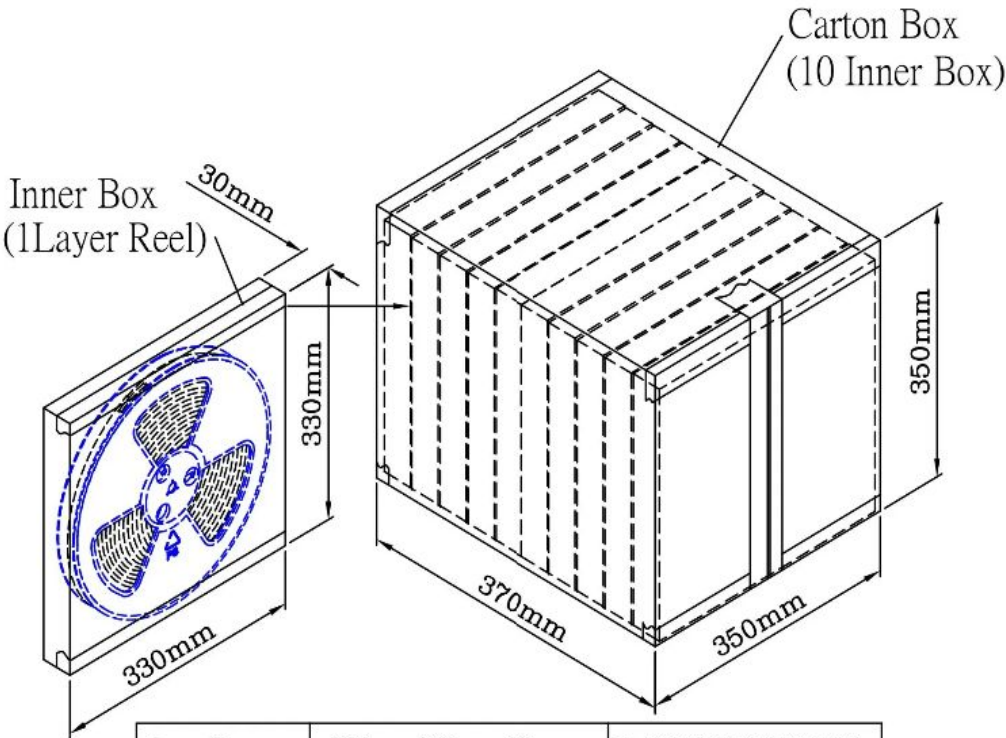
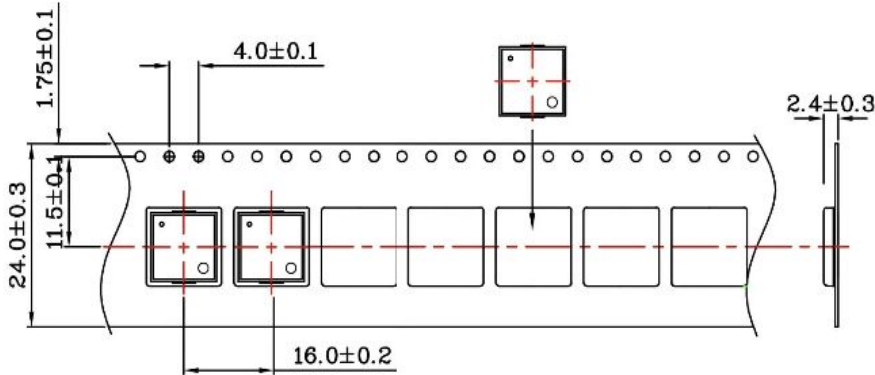
Soldering Condition

Page 5
Packing

Packing



1 Reel : 2000PCS



Inner Box	330mmx330mmx30mm	1x2000PCS=20,000PCS
Carton Box	350mmx350mmx370mm	10x2000PCS=20,000PCS