



Pieezo Buzzer
10 × 10 × 3.0 mm
With SMT
CS10P03M12 -5200

Revision

Date	Version	Status	Changes	Approver
2019/2/1	V0.1	Draft	First release	AX

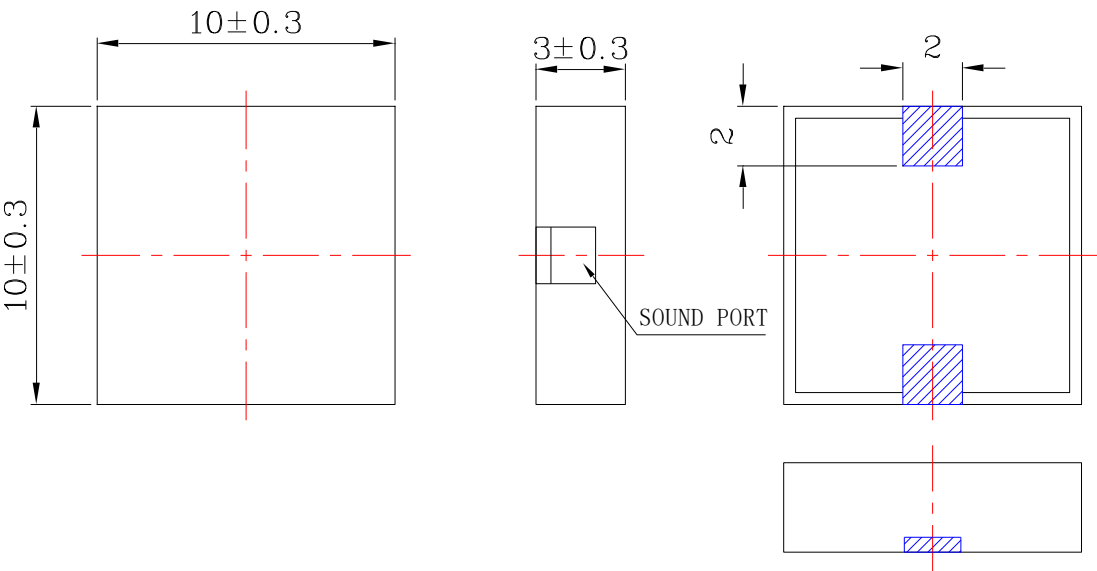
Specifications

Parameter	Condition	Specification	Units
Oscillation Frequency	Square Wave	5.2	KHz
Operating Voltage		1~25	V _{p-p}
Rated Voltage		5	V _{p-p}
Current Consumption	at Rated Voltage	MAX.3	mA
Sound Pressure Level	at 10cm at Rated Voltage	MIN.70	dB
Capacitance	at100Hz	12000±30%	PF
Tone Nature		Constant	
Operating Temperature		-20~ +70	°C
Storage Temperature		-30 ~ +80	°C
Dimension	See appearance drawing	10 x 10 x H3	mm
Weight (MAX)		0.75	gram
Housing Material		LCK(Black)	
Leading Pin	See appearance drawing	Tin Plated Brass(Sn)	
Environmental Protection Regulation		RoHS	

Notes: All specifications measured at 5~35°C, humidity at 45~85%, under 86~106 kPa pressure, unless otherwise noted.

MECHANICAL DRAWING

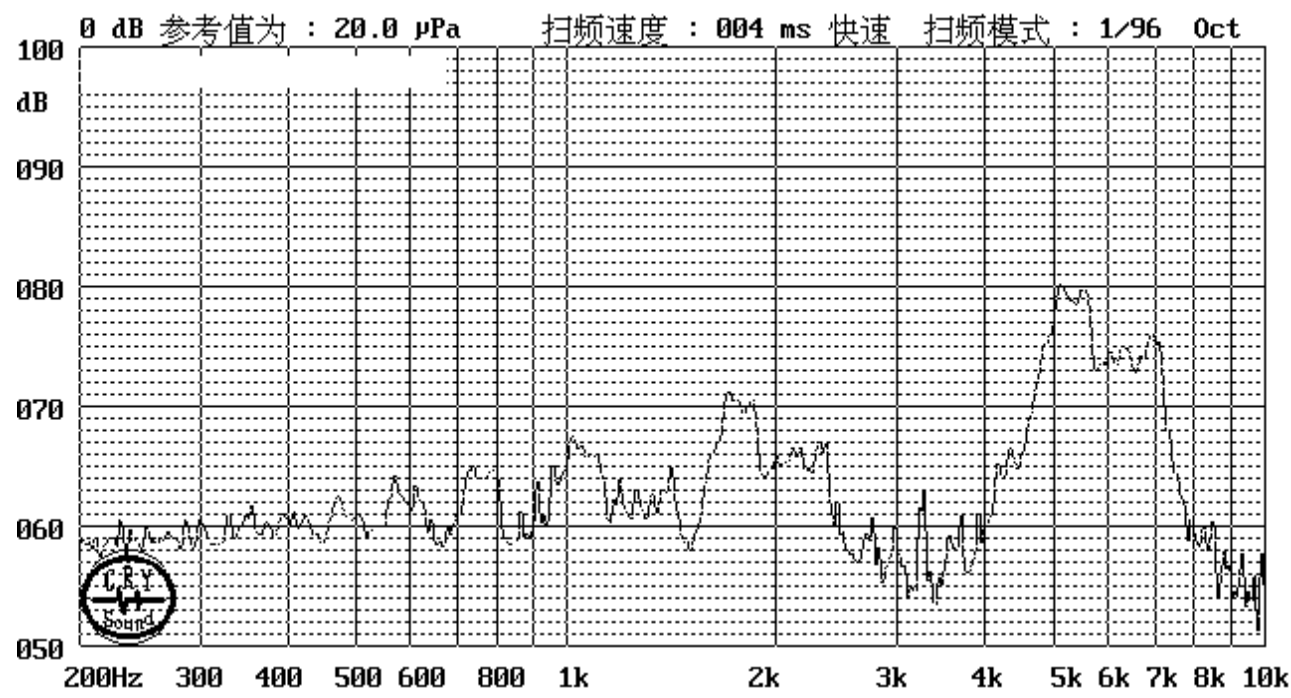
Units: mm
Tolerance: $\pm 0.3\text{mm}$



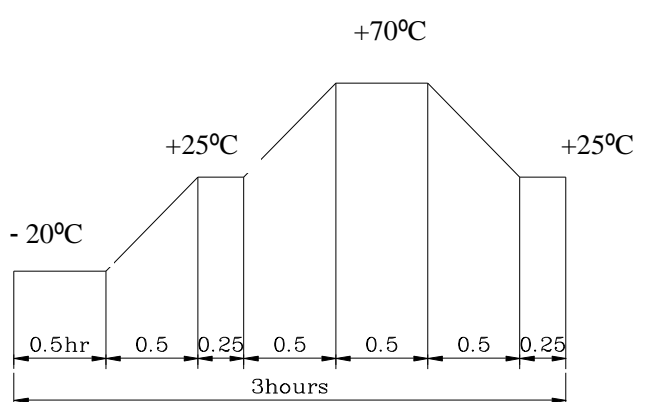
RESPONSE CURVES

Frequency Response Curve

Test condition: 0.1M,



RELIABILITY TEST

1	High Temperature Test (Storage)	After being placed in a chamber with $80 \pm 2^\circ\text{C}$ for 96 hours and then being placed in normal condition for 2 hours. Allowable variation of SPL after test: 10dB.
2	Low Temperature Test (Storage)	After being Placed in a chamber with $-30 \pm 2^\circ\text{C}$ for 96 hours and then being placed in normal condition for 2 hours. Allowable variation of SPL after test: 10dB.
3	Humidity Test	After being Placed in a chamber with 90-95% R.H. at $40 \pm 2^\circ\text{C}$ for 96 hours and then being placed in normal condition for 2 hours. Allowable variation of SPL after test: 10dB.
4	Temperature Cycle Test	<p>The part shall be subjected to 5 cycles. One cycle shall be consist of :</p>  <p>Allowable variation of SPL after test: 10dB.</p>
5	Drop Test	Drop on a hard wood board of 4cm thick, any directions ,6 times,at the height of 75cm .Allowable variation of SPL after test: 10dB.
6	Vibration Test	After being applied vibration of amplitude of 1.5mm with 10 to 55 Hz band of vibration frequency to each of 3 perpendicular directions for 2 hours .Allowable variation of SPL after test: 10dB.
7	Solderability Test	Lead terminals are immersed in rosin for 5 seconds and then immersed in solder bath of $+300 \pm 5^\circ\text{C}$ for 3-1 seconds . 90% min. lead terminals shall be wet with solder (Except the edge of terminals).
8	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 and cutting off.

Standard Test Condition: a) Temperature : $+5 \sim +35^\circ\text{C}$ b) Humidity : 45-85% c) Pressure : 860-1060mbar

一般测试条件: a) 温度 : $+5 \sim +35^\circ\text{C}$ b) 湿度 : 45-85% c) 气压 : 860-1060mbar

Judgment Test Condition: a) Temperature : $+25 \pm 2^\circ\text{C}$ b) Humidity : 60-70% c) Pressure : 860-1060mbar

争议时测试条件 : a) 温度 : $+25 \pm 2^\circ\text{C}$ b) 湿度 : 60-70% c) 气压 : 860-1060mbar

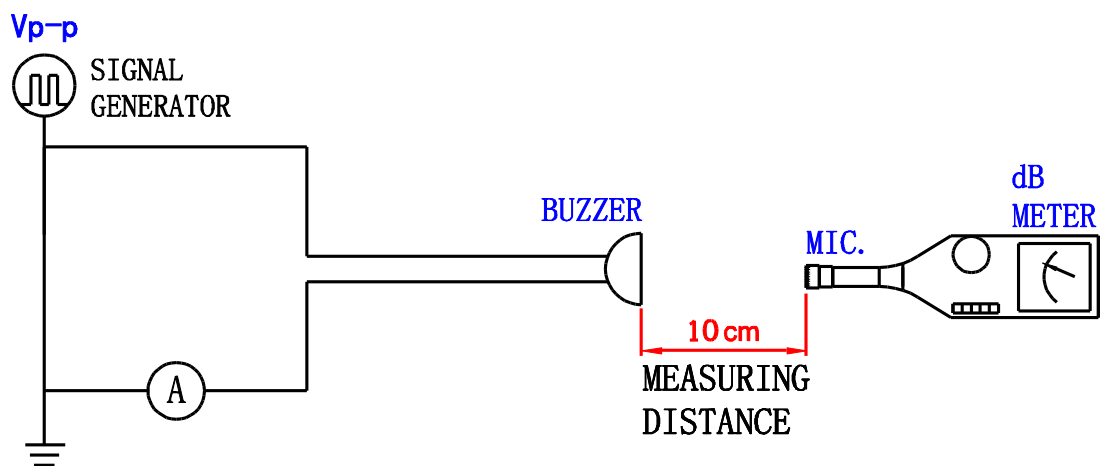
MEASURING METHOD

Standard Measurement conditions

Temperature: $25 \pm 2^\circ\text{C}$ Humidity: 45-65%

Acoustic Characteristics:

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



In the measuring test, buzzer is placed as follows:

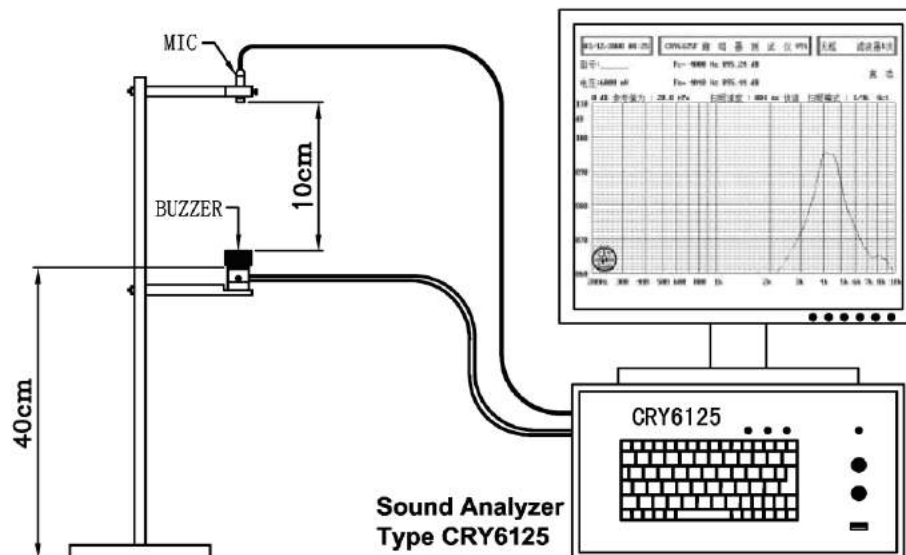
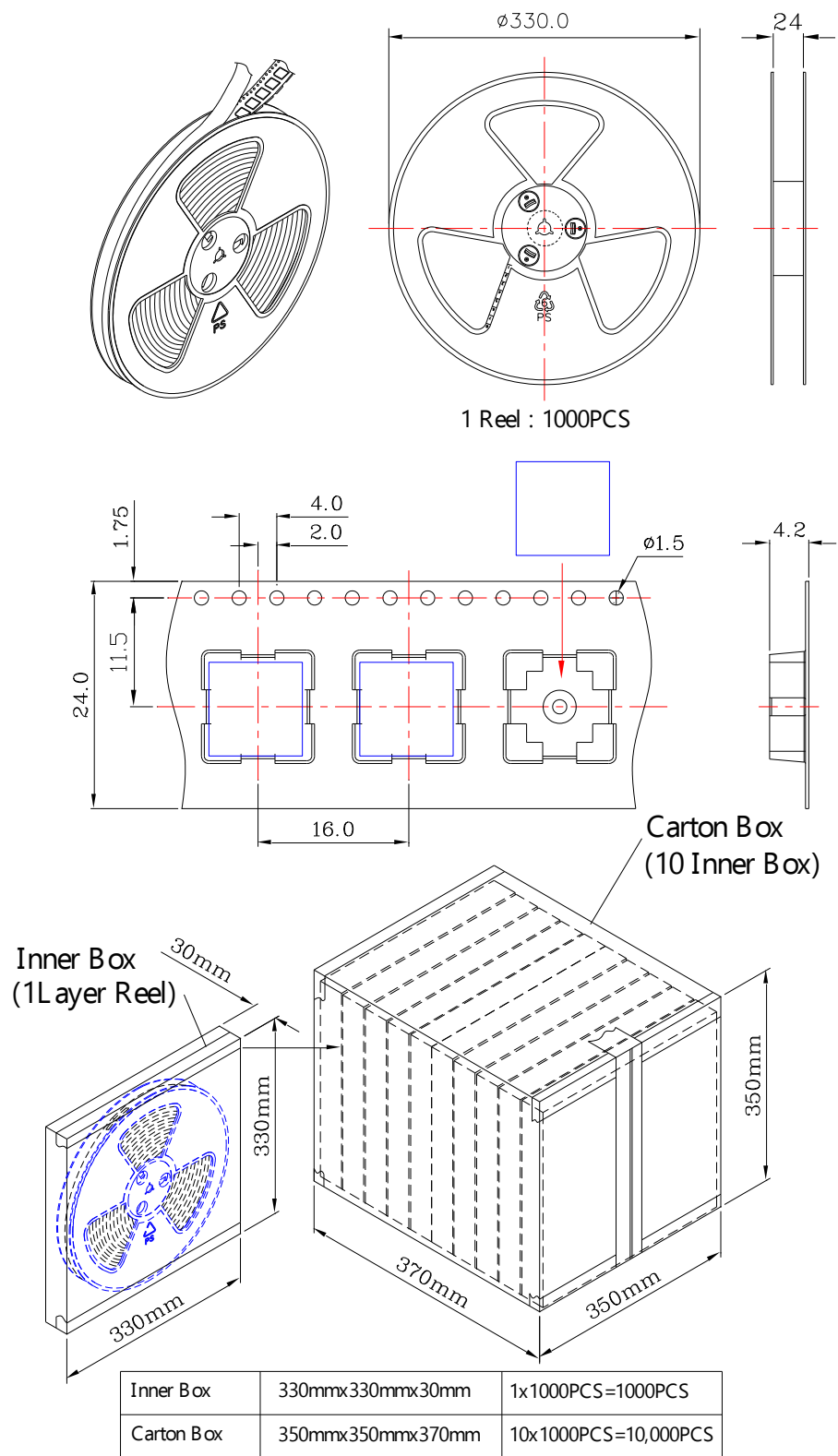


Fig. 1 Block Diagram for Measurement Method

PACKAGING

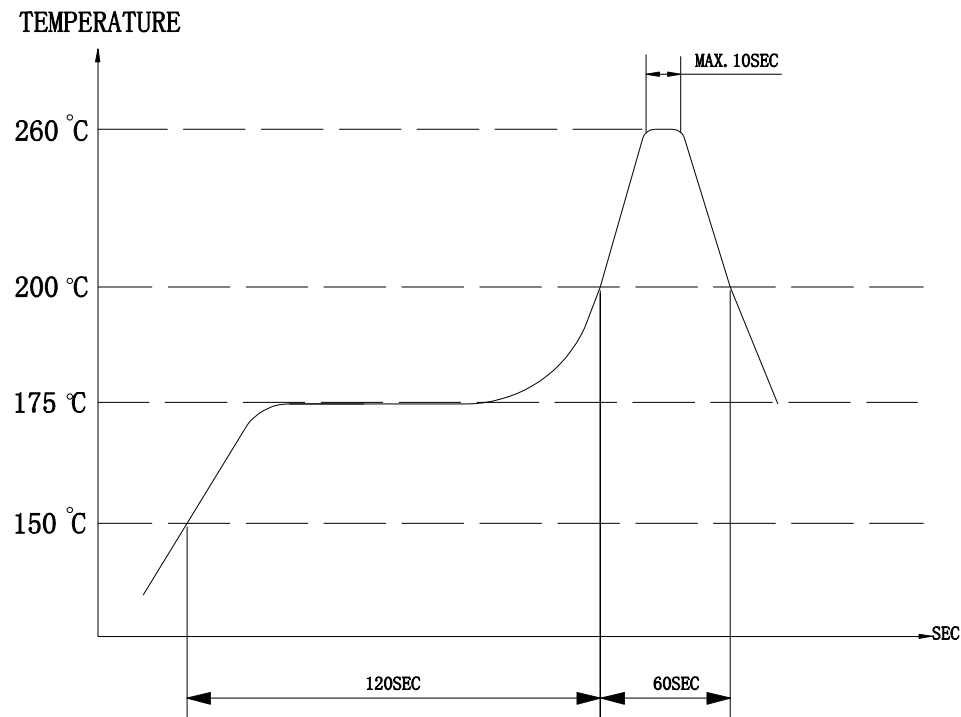


Soldering Condition

(1) Recommendable reflow soldering condition is as follows

(Reflow soldering is twice)

Note: It is requested that reflow soldering should be executed after heat of product goes down to normal.



Heat resistant line

(Used when heat resistant reliability test is performed)

(2) Manual soldering

Manual soldering temperature 350 °C within 5 sec.