Piezoelectronic Ceramic Buzzer

SMD

12×12×3.1 mm

FHS12PP031M15000-4000

Revision

Date	Version	Status	Changes	Approver
2024/2/28	V0.1	Draft	First release	AX

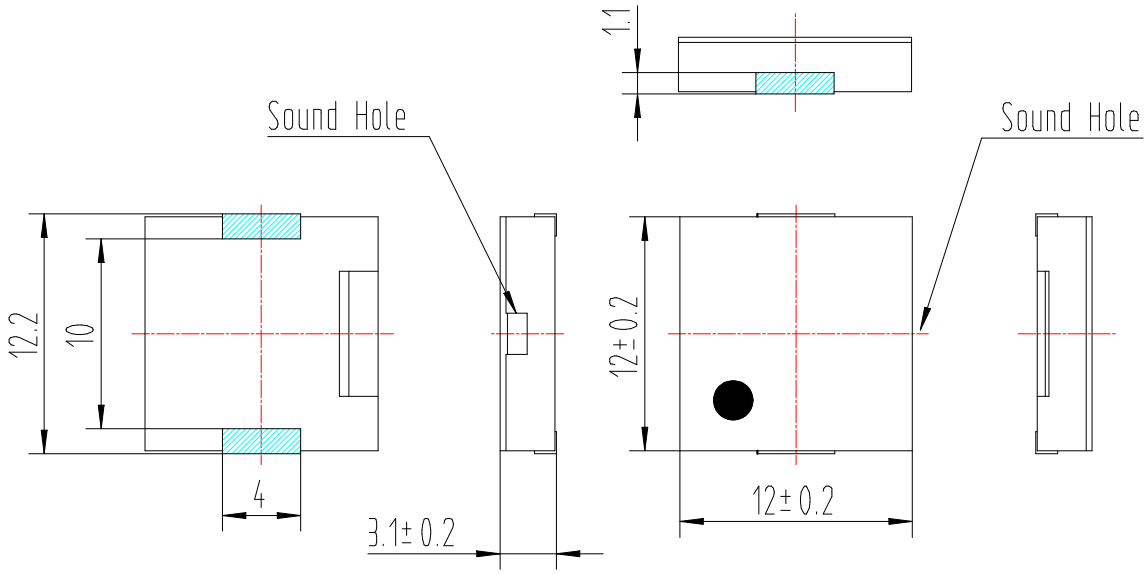
1.Technical Parameter **Measuring condition**

Part shall be measured under a condition (Temperature: 5 ～ 35℃, Humidity: 45%～85%R.H., Atmospheric pressure: 860 ～1060hPa) unless the standard condition (Temperature: 25±3℃, Humidity: 60±10%R.H. Atmospheric pressure: 860 ～1060hPa) is regulated to measure.

1	Resonant Frequency	4000Hz
2	Operating Voltage	1～25 Vp-p
3	Rated Current	Max.1mA ,at 4KHz 50% duty Square Wave 3Vp-p
4	Sound Output at 10cm	Min. 75dB,at 4KHz 50% duty Square Wave 3Vp-p
5	Capacitance	15000±30%pF at 120Hz
6	Operating Temperature	-40℃～+105℃
7	Store Temperature	-40℃～+120℃
8	Net Weight	Approx 0.5g
9	RoHS	Yes

2.Dimensions

Unit: mm



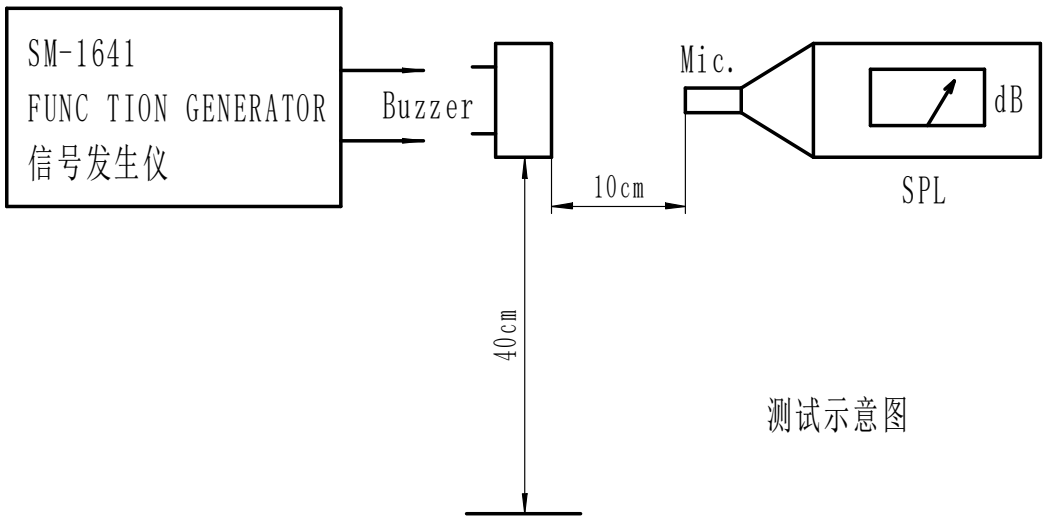
*Unit: mm; Tolerance: ±0.3mm Except Specified

*Housing Material: Black LCP

*Terminal plate: 2 soldering pads, tin Plating Brass

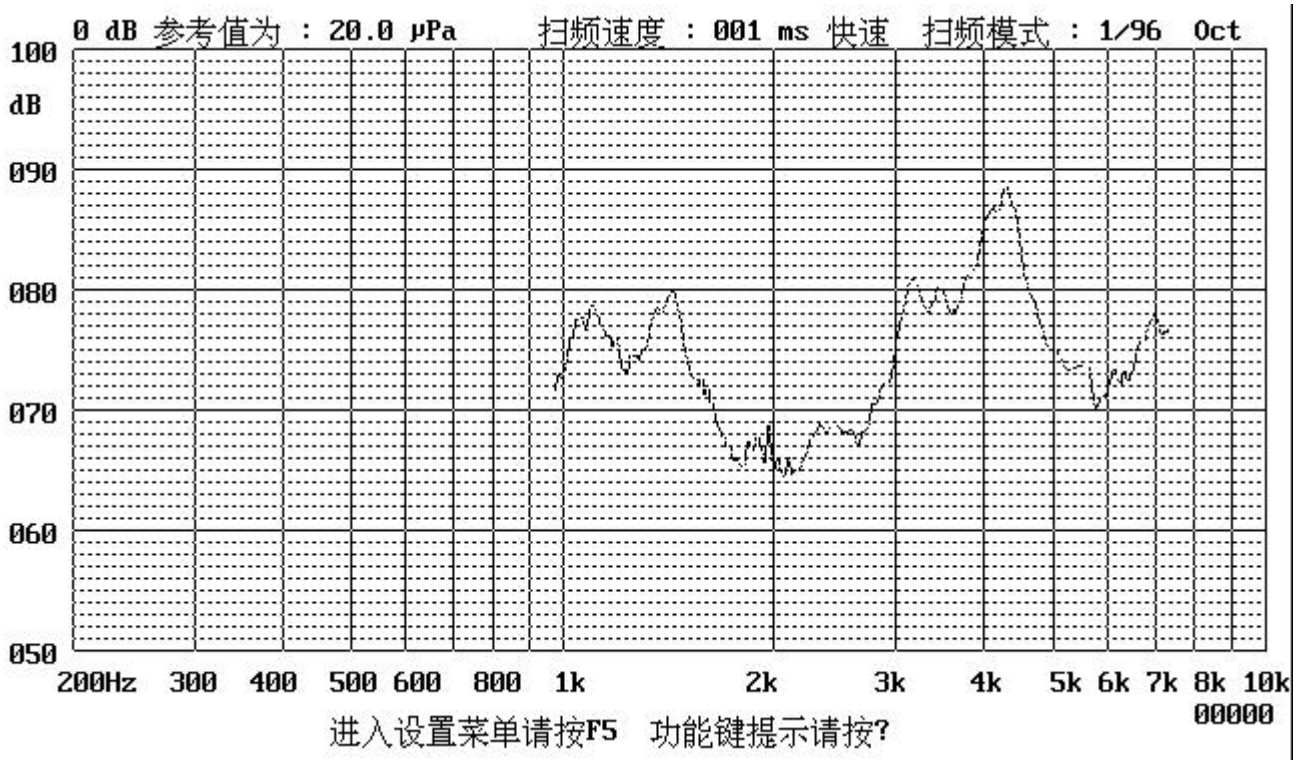
3.Electrical And Acoustical Measuring Condition

Recommended Setting



测试示意图

4.Frequency Response

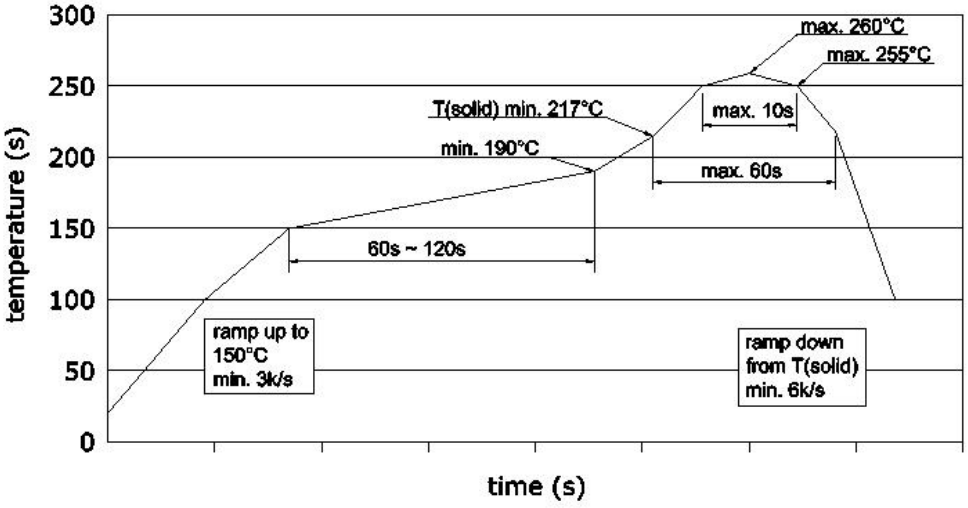


3Vp-p 50% duty Square wave,10cm

5.Surface mounting condition

5.1 Reflow soldering

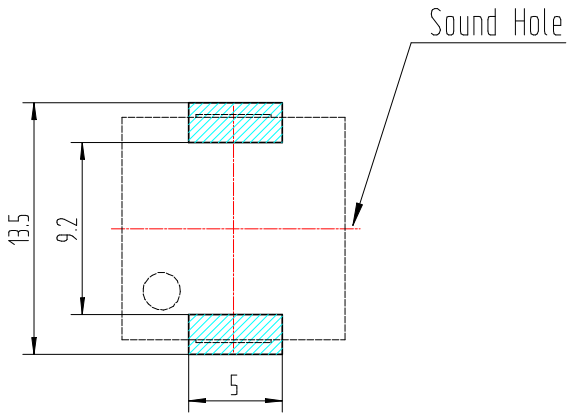
Recommendable reflow soldering condition is as follows.



Recommended reflow oven temperature profile

Note: (1) In automated mounting of the SMD sound transducers on PCB, any bending, expanding and pulling forces or shocks against the SMD sound transducers shall be kept minimum to prevent them from electrical failures and mechanical damages of the devices.
(2) In the reflow soldering, too high soldering temperatures and too large temperature Gradient such as rapid heating or cooling may cause electrical failures and mechanical damages of the devices.

5.2 Soldering pattern



6.Reliability Test

All specitications must be satisfied after the test(Recovery:2 to 4 hours of recovery under the standard Condition after the removal from test chamber).

6.1Ordinary Temperature Life Test

At 3Vp-p ,1minutes ON 1minutes OFF for 1000 hours in room temperature

6.2High Temperature Test

No function at +120+/-2℃ for 240 hours, Function at +105+/-2℃ for 240 hours

6.3Low Temperature Test

No function at -40+/-2℃ for 240 hours, Function at -40+/-2℃ for 240 hours

6.4Humidity Test

Temperature:+40℃±2℃ Relative Humidity:95+/-5% for 240 hours

6.5Temperature Shock Test

-40+/-2℃ /0.5hour→ +25+/-2℃/0.25hours→-+105+/-2℃/0.5hour→ +25+/-2℃/0.25hour Temperature Go up or Drop time is 0.5hour 3hours per 1cycle.Total is 5 cycles.

6.6Drop Test

Dropped naturally from 750mm heigh onto the surface of 10mm wooden board. 2 directions-upper and Side of the part are applied.

6.7Vibration Test

1.5mm with 10-50Hz of vibration frequency to each of 3 perpendicular directions for 2 hours 980m/s (=100g) shock for each mutually perpendicular directions,halr sine wave ,3 times each

6.8Reflow Test

Samples put through reflowing soldering oven 2 twice

Use recommendable reflow soldering condition (as shown in 6.1)

(1) No abnormality should be found after reflow

(2) 90% min. soldering pads shall be with solder.(except the edge of pad)

Samples put on PCB with solder paste through reflowing soldering oven 1 times

For a period of one year from date of manufacture under normal operations

Note:

As this product is not protected from foreign material entering, please make sure that any foreign materials (e.g. magnetic powder, washing solvent, flux, corrosive gas) do not enter this product in your production processes. The functional degradation (e.g. SPL down) may occur if foreign material enter it.

7. Packing

1000pcs for one reel

8000pcs for one carton

outsize of carton:35×32×36cm