SPECIFICATION FOR APPRONAL

| Customer | • | |
|----------|---|--|
| Customer | • | |

Product Name: Piezo Buzzer (External-drive)

Model Name : VST1470F40

Drawing No. : VS20191104012

Signature of Voise

| Approved by | Checkde by | Issued by | Date |
|-------------|------------|-----------|------|
| | | | |



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| <u> </u> | Revision No. | 1.0 |
| Model No.: VST1470F40 | Drawing No. | VS20191104012 |

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1. Revision

| Rev.No. | Date | Page | Description of Revision |
|---------|-----------|------|-------------------------|
| 1.0 | 2015/1/21 | | Preliminary |
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2. Scope

This product specification is applied to the Buzzer in alarm systems. Please contact us when using this product for any other applications than described in the above.

3. General Characteristics

3.1 Out-Diameter : 14 mm
 3.2 Height : 6.7 mm
 3.3 Weight : 0.9 g

3.4 Operating Temperature : $-20 \sim +80 \,^{\circ}\mathbb{C}$ without loss of function 3.5 Store Temperature : $-30 \sim +90 \,^{\circ}\mathbb{C}$ without loss of function

4. Electrical and Acoustic Characteristics.

Test condition :15 ~ 35 $^{\circ}$ C Temp., 25% ~ 75% RH,86~106 kPa Refer to IEC60268-1

| No | Items | Specification |
|----|--------------------------|---------------------------------|
| 1 | Rated Voltage | 5Vp-p square wave |
| 2 | Max Working Voltage | 30Vp-p square wave |
| 3 | Max.Rated Current | 3mA at 4.0KHz/5Vp-p Square Wave |
| 4 | Capacitance at 120Hz | 12000±30%PF |
| 5 | Min Sound Preesure Level | 90dB/5Vp-p square wave/10cm |
| 6 | Resonant Frequency | 4.0±0.5KHz |
| 7 | Tone Nature | Continuous |
| 8 | Housing Material | PBT |
| 9 | Color | Black |



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5. Reliability Test

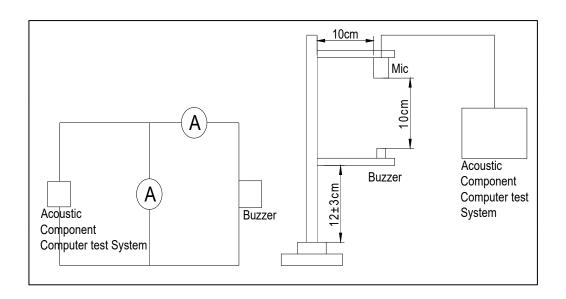
After test(1~7item), the buzzer S.P.L . difference shall be within ±8dB, and the appearance not exist any change to be harmful to normal operation

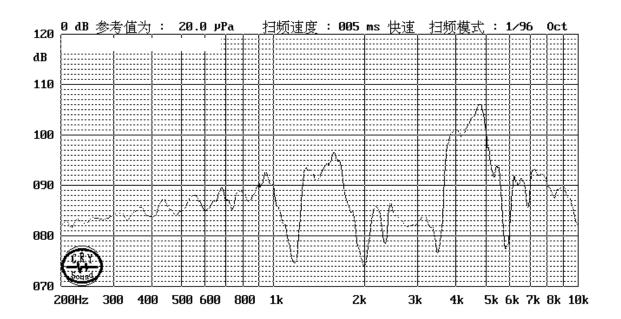
| No | Items | Specification |
|----|------------------------------|---|
| 1 | High Temp.Test | After being woked in a chamber with +80±2 $^{\circ}$ C for 2h and then being placed in natural condition for 2h, and then check. |
| 2 | Low Temp.Test | First being worked in a chamber with -30±2 $^{\circ}$ C for 2h and then being placed in natural condtion for 2h, and then check. |
| 3 | Humidity Test | After being placed in a chamber with 90 to 95%R.H. at +40±2 $^{\circ}$ C for 2 h and then being placed in natural condition for 2h ,and then check. |
| 4 | Thermal Shock Test | After being worked in a chamber at +80±2 °C for 1 hour, then sounder shall be placed in a chamber at -20±2 °C for 1 hour(1 cycle is the below diagram). The test duration is for 10 cycle.after being placed in natural condition for 1 hour.and then check. |
| 5 | Vibration Test | Being applied vibration of amplitude of 1.5mm with 10-30Hz band of vibration frequency,X.Y.Z.3 direction.2 hours each, total 6 hours. |
| 6 | Drop Test | Free drop fram 1.0 meter height to a board 20mm thick hard wood board. and be nothing mechanical damage. tatol 6 times. |
| 7 | Solderability | Lead terminals are immersed in rosin for 5 seconds and then immersed in solder bath of +260±5 $^{\circ}$ C for 3±0.5 seconds. |
| 8 | Terminal Strength Pulling | The force 10 seconds of 9.8N is applied go each terminal in axial direction. |



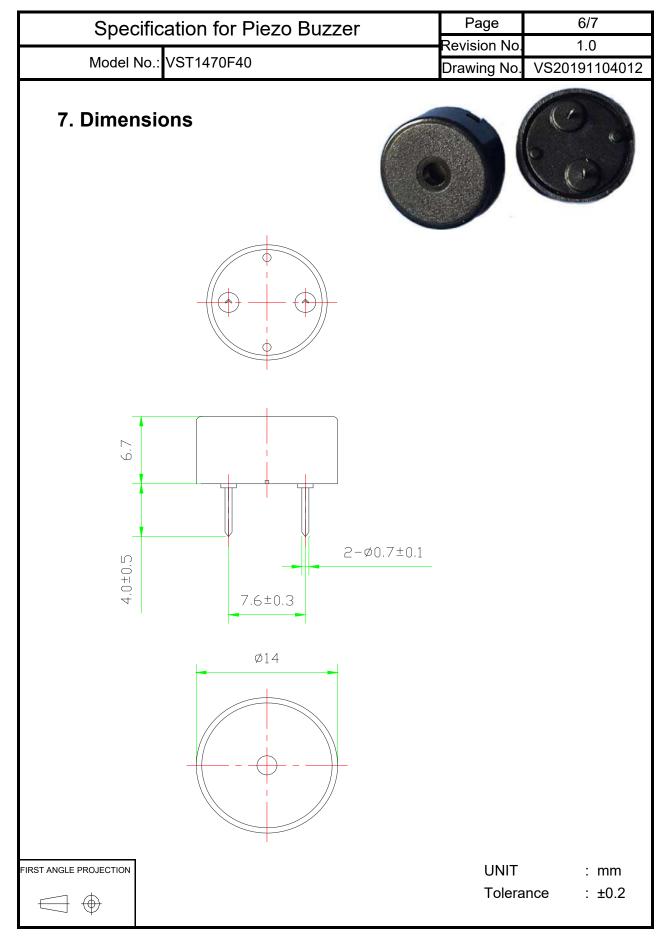
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6. Measurement Method & Frequency Response curve











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8. Packing

Each minimum package unit of products shall be in a carton box and it shall be clearly marked with Part Number ,quantity and outgoing inspection number.

There shall be no mechanical damage on products during in storage.