

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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MODEL: PT-1407
PRODUCT: Piezo Buzzer
EDITION: A/2017

THIS SPECIFICATION APPLIES TO THE PIEZO BUZZER

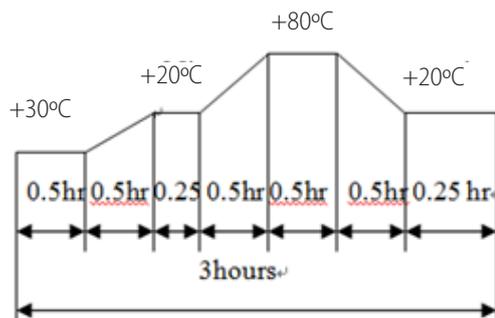
SPECIFICATION

Test condition: TEMP=+25±2 °C Related humidity=65±5% Air pressure: 860 ~ 1060mbar

| item | unit | specification | condition |
|-------------------------------------|------|-----------------------|--|
| rated voltage | VDC | 5.0 | |
| operating volt | VDC | 1 ~ 20 Max | |
| current consumption | mA | 1 Max | At 5V p-p, square wave, 4.0 KHz |
| sound output | dba | 80 | At 10 cm / 5V p-p, square wave, 4.0KHz |
| resonant frequency | Hz | 4000 | |
| capacitance at 30 Hz | pF | 15000 ± 30 | at 120Hz |
| operating temp | °C | -20 ~ +70 | |
| storage temp | °C | -30 ~ +80 | |
| dimension | mm | φ13.6x6.8 | See attached drawing |
| weight | gram | 1.0 | |
| material | | LCP (Black) | |
| terminal | | Pin type (Red copper) | See attached drawing |
| environmental protection regulation | | RoHS | |

ENVIRONMENT TEST

| item | test condition | evaluation standard |
|------------------|---|---|
| high temp. test | After being placed in a chamber at +80°C for 96 hours. | Being placed for 4 hours at +25°C, buzzer will be measured. |
| low temp. test | After being placed in a chamber at -30°C for 96 hours. | The value of oscillation, frequency / current consumption would be in ±10% compared with initial one. |
| Humidity test | After being placed in a chamber at +70°C, and 90±5% relative humidity for 96hours | The SPL would be in ±10dB compared with initial one. |
| Temp. cycle test | The part will be subjected to 5 cycles. One cycle shall be consist of: | |





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RELIABILITY TEST

| item | test conditions | evaluation standard |
|---------------------|---|--|
| operating life test | CONTINUOUS LIFE TEST 48hours of continuous operation at +55°C with maximum rated voltage applied. | After the test the part will meet specifications without any degradation in appearance and performance except SPL, after 4 hours at +25°C. The SPL would be in ± 10 dba compared with initial one. |
| | INTERMITTENT LIFE TEST A duty cycle of 1 minute on, 1 minutes off, a minimum of 1000 times at $+25\pm 2^\circ\text{C}$ and maximum rated voltage applied | |

TEST CONDITION

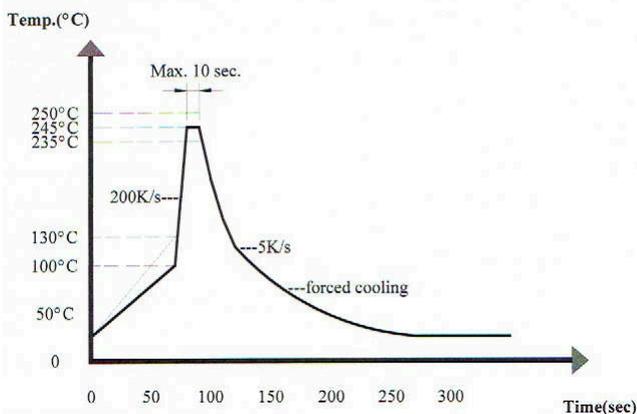
Standard Test Condition: a)Temperature: $+5\sim +35^\circ\text{C}$ b)Humidity:45~85% c)Pressure: 860~1060mbar

MECHANICAL CHARACTERISTICS

| item | test conditions | evaluation standard |
|------------------------------|---|---|
| solderability | Lead terminal are immersed in rosin for 5 seconds and then immersed in solder bath of $+250\pm 5^\circ\text{C}$ for 3 ± 1 seconds. | 90% min. lead terminals will be wet with solder |
| soldering heat resistance | The product is followed the reflow temperature curve to test it's reflow thermostability. | No interference in operation. |
| terminal mechanical strength | The force 10 seconds of 9.8N is applied to each terminal in axial direction. | No damage and cutting off. |
| vibration | Buzzer will be measured after being applied vibration of amplitude of 1.5mm with 10Hz to 55Hz band of vibration frequency to each of 3 perpendicular directions for 2 hours | The value of oscillation frequency current consumption should be in $\pm 10\%$ compared with initial one. |
| drop test | The part only will be dropped from a height of 100cm onto a 10mm thick wooden board 3 times in 3 axes(X,Y,Z). A total of 9 times. | The SPL would be in ± 10 db compared with initial one |

RECOMMENDED TEMPERATURE PROFILE

* Wave Soldering profile of lead-free



Recommendable wave soldering condition is as follows:

Note 1: It is requested that wave soldering should be executed after heat of product goes down to normal temperature.

Note 2: Peak wave temperature of 235°C maximum of 10 seconds.



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MEASURING METHOD

S.P.L Measuring Circuit

Input Signal: 5.0V p-p, Square wave, 4.0KHz

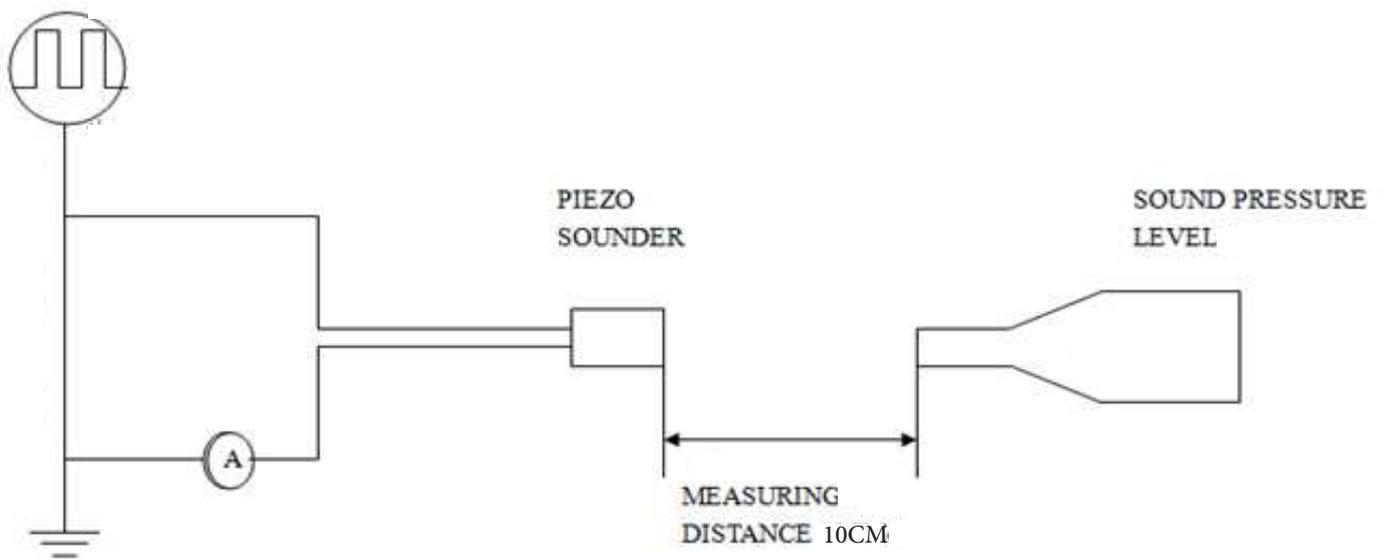
Mic: S.P.L meter TES1351B or equivalent

Mic: RION S.P.L meter UC30 or equivalent

Mic: TION UC30

S.G: Hewlett Packard 33120A

Function Generator or equivalent

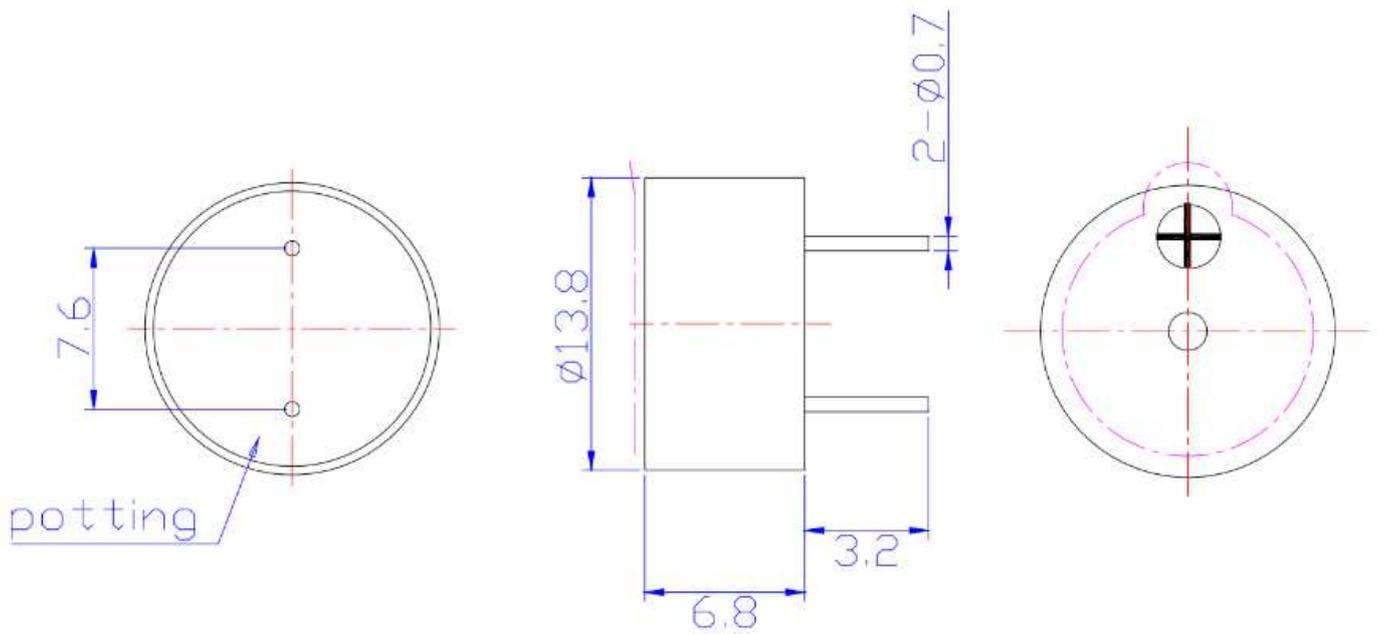




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DIMENSION

Tolerance: ± 0.5 (unit: mm)

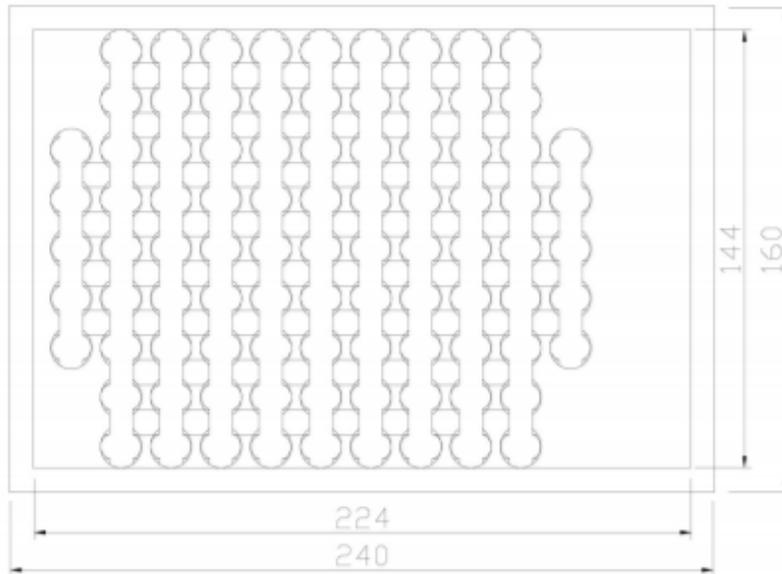


| no | item | material | quantity |
|----|-------|------------------|----------|
| 1 | Case | LCP | 1 |
| 2 | Cover | LCP | 1 |
| 3 | Piezo | Nickel + Ceramic | 1 |
| 4 | Wire | Copper | 2 |

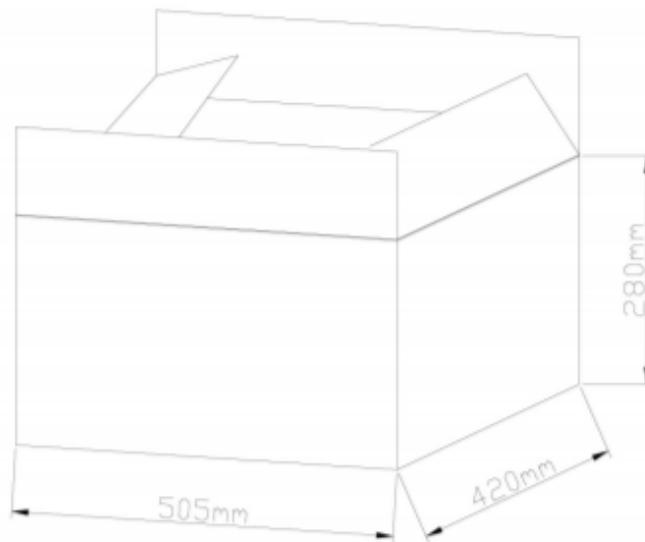


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PACKING



100



5000