

## Electrical and Acoustical Parameter

|                                  |            |
|----------------------------------|------------|
| Rated voltage (VDCp)             | 5.0        |
| Operating voltage (VDC)          | 1.0 – 16.0 |
| Rated current (mA)*              | max. 10.0  |
| Reverse Current(mA)              | max. 100   |
| Sound pressure level (dBA/10cm)* | min. 80    |
| Resonance Frequency (Hz±500)     | 4000       |

Remark:

\*Value applying rated voltage (DC)

## Mechanical, Environmental Parameter

|                            |            |
|----------------------------|------------|
| Contact / Wire             | SMD        |
| Operating temperature (°C) | -40 to +85 |
| Storage temperature (°C)   | -40 to +90 |
| Material housing           | PPS        |
| Color housing              | Black      |
| Component weight (g)       | 2.3        |

Remark:

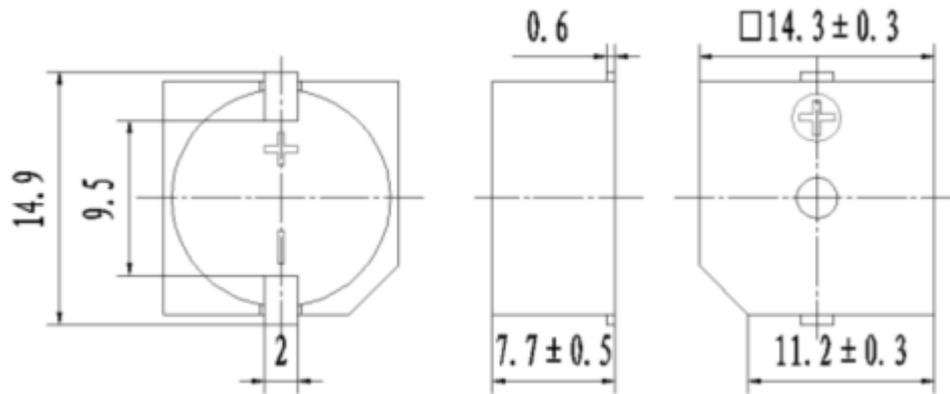
## Approval

|      |                                     |
|------|-------------------------------------|
| RoHs | <input checked="" type="checkbox"/> |
| UL   | <input type="checkbox"/>            |

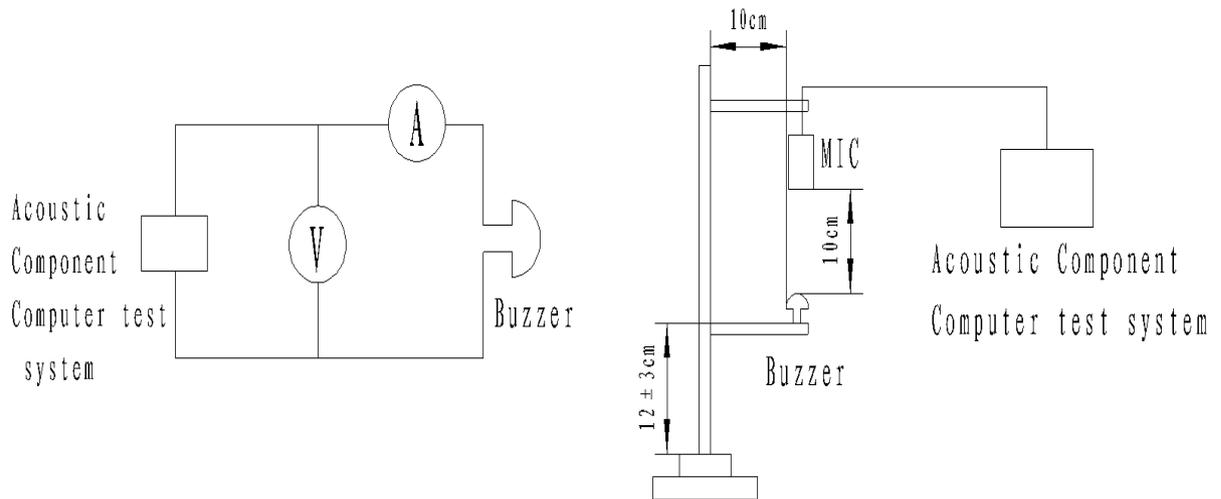
|             |    |            |                                     |                    |              |
|-------------|----|------------|-------------------------------------|--------------------|--------------|
| Designed by | MZ | 01.10.2014 | Dimensions without tolerance ±0.5mm | Index: 00          | Current date |
| Released by | CB | 01.10.2014 | Drawing number                      | <b>141001.1PDB</b> | 01.10.2014   |
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## Drawing of Component

Unit:mm

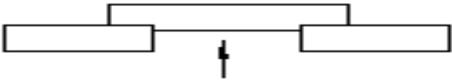


## Test Method



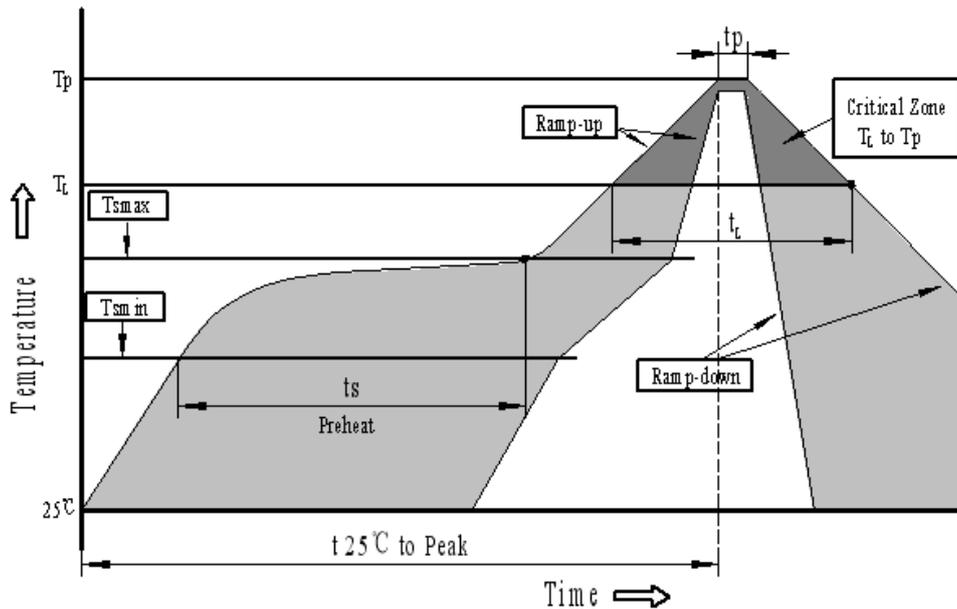
|             |    |            |                                     |                    |              |
|-------------|----|------------|-------------------------------------|--------------------|--------------|
| Designed by | MZ | 01.10.2014 | Dimensions without tolerance ±0.5mm | Index: oo          | Current date |
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## Reliability Test

| NO. | ITEM                                      | TESTING CONDITION   | VARIANCE AFTER TEST  |
|-----|---|---|--|
| 1   | High temp. storage life                   | The part shall be capable of withstanding a storage temperature is +90°C for 120 hours  | All specifications must be satisfied after the test.   |
| 2   | Low temp. storage life                    | The part shall be capable of withstanding a storage temperature is -40°C for 120 hours  |  |
| 3   | Temp. Cycle                               | Total 5 cycles,<br>1 cycle consisting of -40±2°C, 30 minutes<br>40±5°C 15 minutes<br>90±2°C, 30 minutes<br>40±5°C 15 minutes  |  |
| 4   | Humidity Test                             | 40±2°C, 90~95% RH, 120 hours  |  |
| 5   | Vibration Test                            | The part shall be subjected to a vibration cycle is 10Hz in a period of 1 minute. Total peak amplitude shall be 1.52mm(9.3g).<br>The vibration test shall consist of 2 hours per plane in each three mutually perpendicular planes for a total time of 6 hours. |  |
| 6   | Shock                                     | Sounder shall be measured after being applied shock (980m/s <sup>2</sup> ) for each three mutually perpendicular directions to each of 3 times by half sine wave.   |  |
| 7   | Drop Test                                 | Dropped naturally from 700mm height onto the surface of 10mm thick wooden board. 2 directions-upper and side of the part are to be applied.   |  |
| 8   | Lead pull                                 | The part shall be pushed with a force of 9.8N for 10±1 seconds behind the part.<br>  | After the test part shall meet specifications without any degradation in appearance and performance. |
| 9   | Recommended temp. Profile for Reflow Oven | Shown in Fig.1  |  |

|             |    |            |                                     |                    |              |
|-------------|----|------------|-------------------------------------|--------------------|--------------|
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| Released by | CB | 01.10.2014 | Drawing number                      | <b>141001.1PDB</b> |              |
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## Recommended Temp. Profile for Reflow Oven

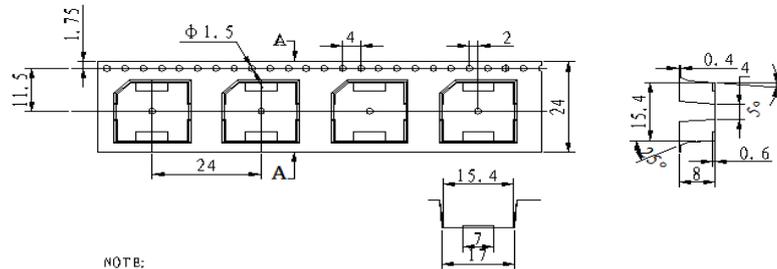


| Profile Feature                                      | Pb-Free Assembly |
|--|------------------|
| Average ramp-up rate( $T_l$ to $T_p$ )               | 3°C/second max.  |
| Preheat  |                  |
| -Temperature Min. ( $T_{smin}$ )                     | 150°C            |
| -Temperature Min. ( $T_{smax}$ )                     | 200°C            |
| -Temperature Min. ( $t_s$ )                          | 60~180 seconds   |
| $T_{smax}$ to $T_l$                                  |                  |
| -Ramp-up Rate  | 3°C/second max.  |
| Time maintained above:                               |                  |
| - Temperature( $T_l$ )                               | 217°C            |
| -Time( $T_l$ )                                       | 60~150 seconds   |
| Peak temperature( $T_p$ )                            | 245°C+0/-5°C     |
| Time within 5°C of actual Peak temperature ( $t_p$ ) | 6 seconds max.   |
| Ramp-down Rate                                       | 6°C/second max.  |
| Time 25°C to Peak Temperature                        | 8 minutes max.   |

**Information: hand soldering is not possible**

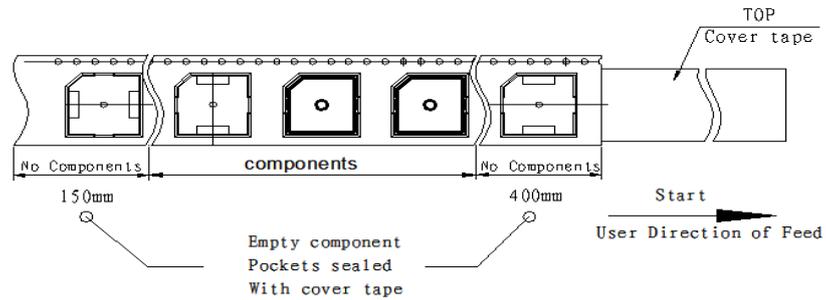
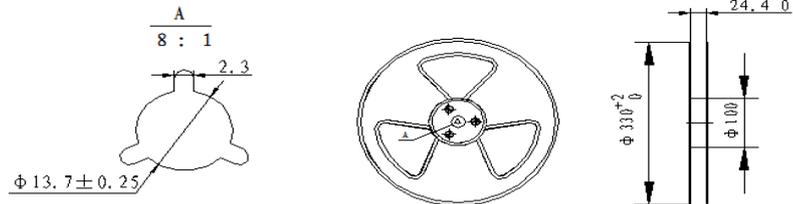
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## Packaging Information



**NOTE:**

1. 10 sprocket hole pitch cumulative tolerance  $\pm 0.2$ mm.
2. All dimensions meet B(A-481-D) requirements.
3. Thickness:  $0.4 \pm 0.05$ mm.
4. Component loaded per 13" reel: 350pcs.



## Revision Table

| Index Nr. | Date Reason - Procedure Change description | Drawing Date | implementation  | Comments |
|-----------|--|--------------|-----------------|----------|
|           |  |              | LS-Nr.:<br>Date |          |
|           |  |              |                 |          |
|           |  |              |                 |          |
|           |  |              |                 |          |

|             |    |            |   |                    |              |
|-------------|----|------------|---|--------------------|--------------|
| Designed by | MZ | 01.10.2014 | Dimensions without tolerance $\pm 0.5$ mm | Index: oo          | Current date |
| Released by | CB | 01.10.2014 | Drawing number                            | <b>141001.1PDB</b> | 01.10.2014   |
| Changed by  |    |            |   |                    | Page 5 of 5  |