

# *MESSRS.*

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## SPECIFICATION FOR APPROVAL

## 承 認 書

|                   |                      |
|-------------------|----------------------|
| Product           | PIEZO BUZZER         |
| Part No.          | AZ-4328E-P-LF (RoHS) |
| Customer Approval |                      |

| Approved By               | Checked By                | Made By                   |
|---------------------------|---------------------------|---------------------------|
| 工程部<br>王台平<br>SEP-25-2006 | 工程部<br>劉民祥<br>SEP-25-2006 | 工程部<br>許俊程<br>SEP-25-2006 |



**ADVANCED ACOUSTIC TECHNOLOGY CORP.**

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# 1. Specifications

AZ-4328E-P-LF

| Items |                    | Units    | Specifications | Conditions                                         |
|-------|--------------------|----------|----------------|----------------------------------------------------|
| 01    | Rated Voltage      | Vp-p     | 10             | (square wave)                                      |
| 02    | Operating Voltage  | Vp-p     | 3 ~ 30         |                                                    |
| 03    | Rated Current      | mA(Max)  | 12             |                                                    |
| 04    | Sound Output       | dBA(Min) | 100            | Rated Voltage , Rated Frequency<br>/ distance 10cm |
| 05    | Resonant Frequency | Hz       | 2800           |                                                    |
| 06    | Capacitance        | pF       | 35000 ±30%     | At 120Hz                                           |
| 07    | Operating Temp.    | °C       | -30 ~ +75      |                                                    |
| 08    | Storage Temp.      | °C       | -40 ~ +85      |                                                    |
| 09    | Weight             | g        | 20             |                                                    |

## 2. Measuring Method

### 2-1. Test Condition

#### STANDARD

Temperature : 15 ~ 35°C

Relative humidity : 25% ~ 85%,

Atmospheric pressure : 860mbar to 1060mbar.

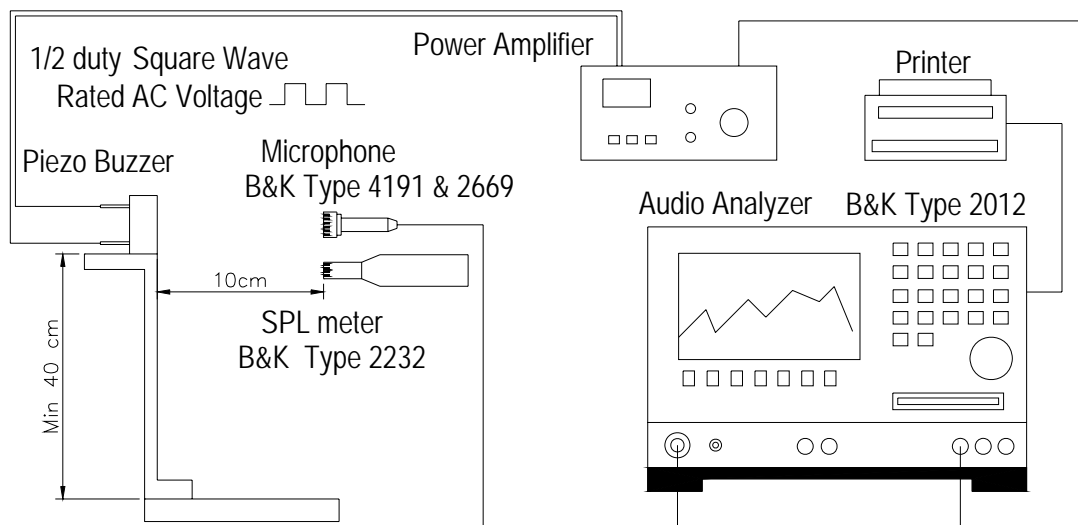
#### JUDGEMENT

Temperature : 20±3°C

Relative humidity : 60% ~ 70%,

Atmospheric pressure : 860mbar to 1060mbar

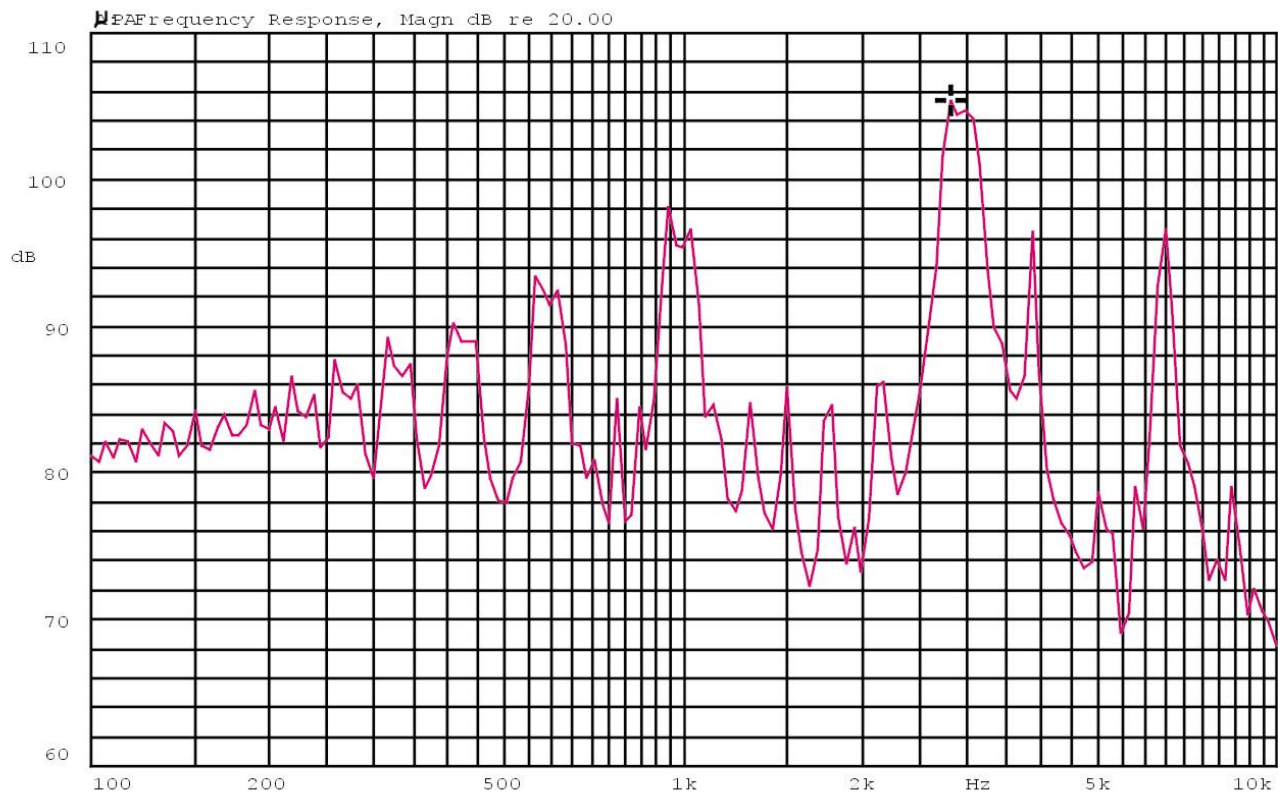
## 2-2. Standard Test Fixture



## 2-3. Frequency Response Curve

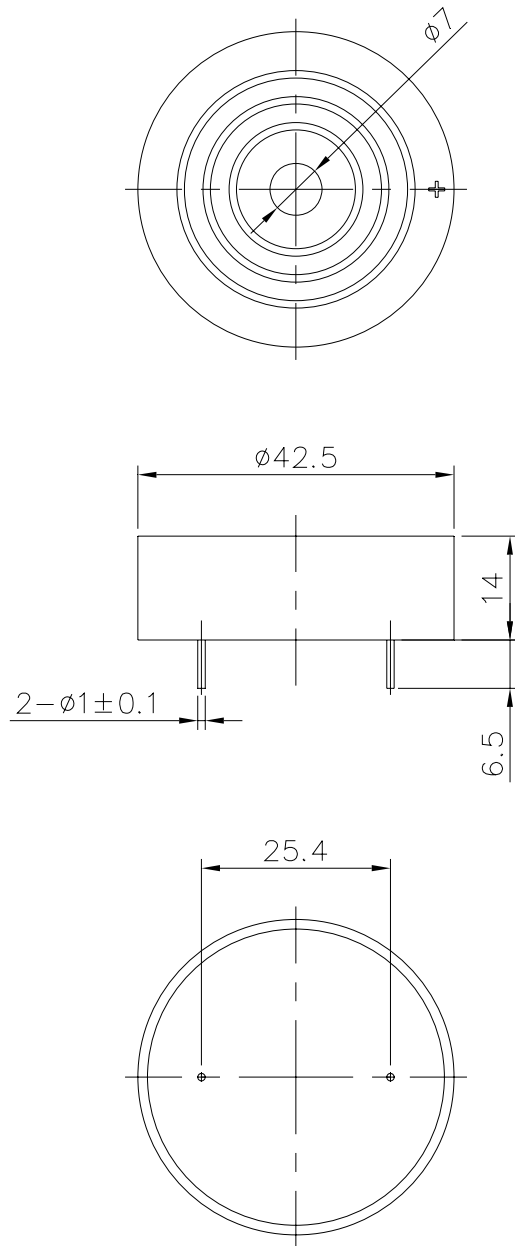
AS-4328E-P

X:2.8184kHz Y:105.44dB ZA:Live Curve SSR T. RMS



Mode: SSR





|                               |  |                                   |                               |              |
|-------------------------------|--|-----------------------------------|-------------------------------|--------------|
| TITLE: <i>PIEZO BUZZER</i>    |  | DRAWN: <i>JOSHN</i> 09/25/2006    | SCALE: 1:1                    | SHEET: 1 : 1 |
| PART NO. <i>AZ-4328E-P-LF</i> |  | DESIGNED: <i>R &amp; D OF AAT</i> | UNITS: <i>mm</i>              |              |
| DWG NO. <i>DTP-1119</i>       |  | CHECKED:                          | TOLERANCE $\pm 0.3$           |              |
|                               |  | APPROVAL:                         | UNLESS OTHERWISE SPECIFIED:   |              |
| REV                           |  | MATERIAL: <i>ABS</i>              | ONE PLACE DECIMAL $\pm$ ***   |              |
|                               |  |                                   | TWO PLACE DECIMAL $\pm$ ***   |              |
|                               |  |                                   | THREE PLACE DECIMAL $\pm$ *** |              |



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## 4. Reliability Test

| Item  |                        | Test conditions                                                                                                                                                                                                                                                                                                                                                                                                 | Evaluation standard                                                                                                                               |       |      |       |       |       |  |
|-------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-------|------|-------|-------|-------|--|
| 01    | High temp.Storage life | The part shall be capable of withstanding a storage Temperature of 85°C for 96 hours.                                                                                                                                                                                                                                                                                                                           | After the test the part shall meet specifications without Any degradation in appearance and performance except S.P.L S.P.L shall be 74dB or more. |       |      |       |       |       |  |
| 02    | Low temp.Storage life  | The part shall be capable of withstanding a storage Temperature of -40°C for 96 hours.                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                   |       |      |       |       |       |  |
| 03    | Temp. cycle            | The part shall be subjected 5 cycles. One cycle shall consist of; <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">-40°C</td> <td style="text-align: center;">85°C</td> </tr> <tr> <td style="text-align: center;">30min</td> <td style="text-align: center;">30min</td> </tr> <tr> <td colspan="2" style="text-align: center;">60min</td> </tr> </table> |                                                                                                                                                   | -40°C | 85°C | 30min | 30min | 60min |  |
| -40°C | 85°C                   |                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                   |       |      |       |       |       |  |
| 30min | 30min                  |                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                   |       |      |       |       |       |  |
| 60min |                        |                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                   |       |      |       |       |       |  |
| 04    | Temp./Humidity cycle   | The part shall be subjected with 90~95% R.H at +40°C for 96 hours.                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                   |       |      |       |       |       |  |
| 05    | Free drop              | The part only shall be dropped from a height of 75cm onto a 40mm thick wooden board 3 times in 3 axes (X.Y.Z). (a total of 9 times).                                                                                                                                                                                                                                                                            |                                                                                                                                                   |       |      |       |       |       |  |
| 06    | Lead Strength          | Pull lead with a force of 10N,on the direction of the lead axis for 10 :10±1 sec                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                   |       |      |       |       |       |  |
| 07    | Vibration              | The part shall be subjected to a vibration cycle of 10Hz to 55Hz to 10Hz in a period of 1 minute. Total peak amplitude shall be 1.52mm (9.3G). The vibration test shall consist of 2 hours per plane in each three mutually perpendicular planes for a total time of 6 hours.                                                                                                                                   |                                                                                                                                                   |       |      |       |       |       |  |

## SOLDERING CONDITION

Recommend using constant branding iron in **30W**, and in temperature range **350±10°C**.  
Soldering time 2 seconds.