



# Datasheet

## RS PRO Piezo Audio Indicator

EN RS Stock No: 181-2737



### A. SCOPE

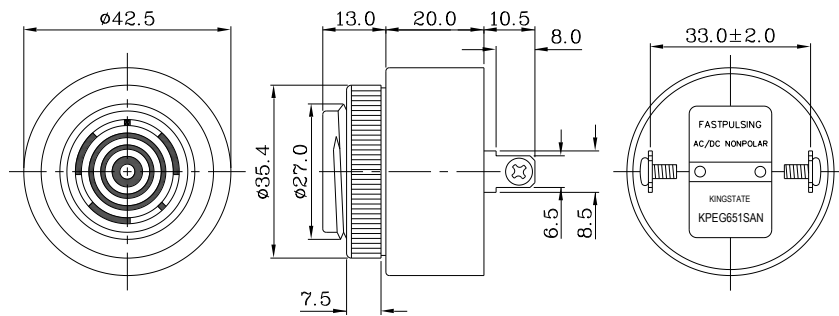
This specification applies piezo audio indicator, 1812685

### B. SPECIFICATION

| No. | Item                                | Unit  | Specification                         | Condition   |
|-----|-------------------------------------|-------|---------------------------------------|---|
| 1   | Resonant frequency                  | KHz   | 2.8 ± 0.5                             |   |
| 2   | Operating Volt. range               | AC/DC | 6 ~ 28                                |   |
| 3   | Current consumption                 | mA    | MAX 5      MAX 26                     | at 6VDC      at 28VDC                                     |
|     |                                     |       | MAX 10                                | at 12VDC  |
| 4   | Sound pressure level                | dB    | MIN 68      MIN 80                    | at 60cm,6VAC/DC      at 60cm,28VAC/DC                     |
|     |                                     |       | MIN 74                                | at 60cm/12VDC   |
| 5   | Rated Voltage                       | VDC   | 12                                    |   |
| 6   | Tone                                |       | Fast Pulse ( 3.0Hz±20% )              | at 12VDC  |
| 7   | Operating temp.                     | °C    | -30 ~ +85                             |   |
| 8   | Storage temp.                       | °C    | -40 ~ +85                             |   |
| 9   | Dimension                           | mm    | φ 42.5 x H33.0                        | See appearance drawing                                    |
| 10  | Weight (MAX)                        | gram  | 33.8                                  |   |
| 11  | Material                            |       | ABS UL-94 1/16"HB High Heat ( Black ) |   |
| 12  | Terminal                            |       | Pin type (Plating Sn)                 | See appearance drawing                                    |
| 13  | Environmental Protection Regulation |       | RoHS                                  |   |
| 14  | Storage life                        | month | 6                                     | 6 months preservation at room temp.(25 ±3°C), Humidity40% |



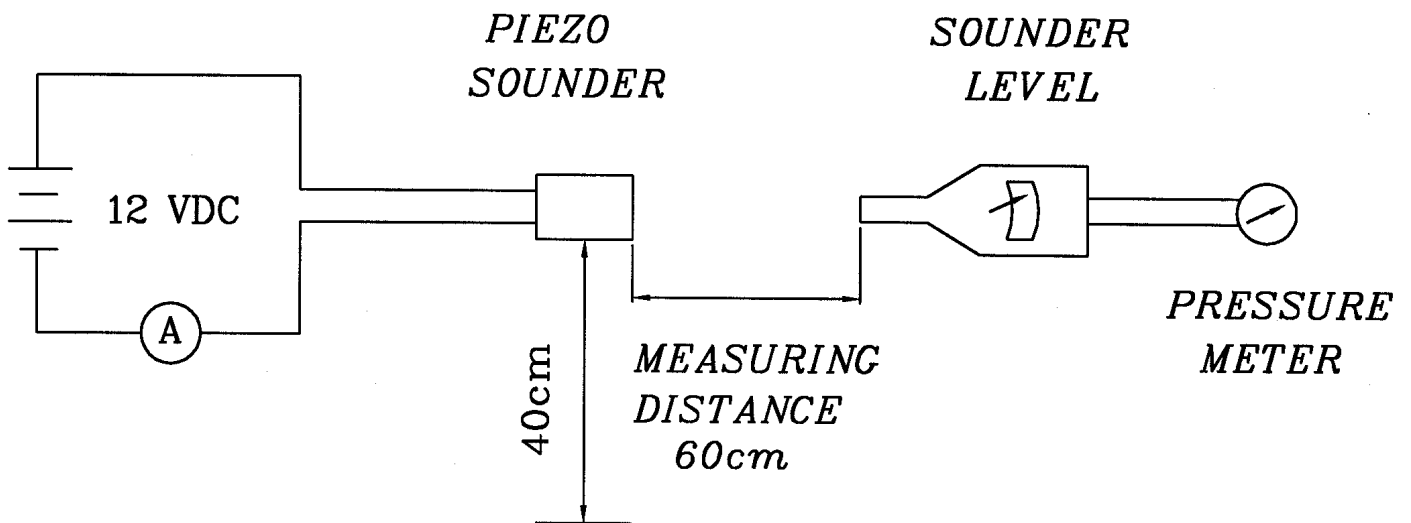
## C. APPEARANCE DRAWING



**Tol :  $\pm 0.5$**   
**Unit:mm**

## D. MEASURING METHOD

S.P.L. Measuring Circuit



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

## E. MECHANICAL CHARACTERISTICS

| No. | Item                         | Test Condition  | Evaluation standard  |
|-----|------------------------------|---|--|
| 1   | Solderability                | Lead terminals are immersed in rosin for 5 seconds and then immersed in solder bath of $+270\pm 5^{\circ}\text{C}$ for $3\pm 1$ seconds.  | 90% min. lead terminals shall be wet with solder. (Except the edge of terminal)  |
| 2   | Soldering Heat Resistance    | Lead terminal are immersed up to 1.5mm from sounder's body in solder bath of $+300\pm 5^{\circ}\text{C}$ for $3\pm 0.5$ seconds or $+260\pm 5^{\circ}\text{C}$ for $10\pm 1$ seconds. | No interference in operation   |
| 3   | Terminal Mechanical Strength | The force 10 seconds of 9.8N (1.0kg) is applied to each terminal in axial direction.  | No damage and cutting off  |
| 4   | Vibration                    | Buzzer shall be measured after being applied vibration of amplitude of 1.5mm with 10 to 55hz band of vibration frequency to each of 3 per-pendicular directions for 2 hours.          | The value of oscillation frequency/ current consumption should be in 10% compared with initial ones .The SPL should be in $\pm 10\text{dB}$ compared with initial one. |
| 5   | Drop test                    | <b>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).</b>   |  |

## F. ENVIRONMENT TEST

| No. | Item             | Test Condition   | Evaluation standard   |
|-----|------------------|--|---|
| 1   | High temp. test  | After being placed in a chamber at $+85^{\circ}\text{C}$ for 240 hours                                   | Being placed for 4 hours at $+25^{\circ}\text{C}$ , buzzer shall be measured. The value of oscillation frequency/ current consumption should be in $\pm 10\%$ compared with initial ones .The SPL should be in $\pm 10\text{dB}$ compared with initial one. |
| 2   | Low temp. test   | After being placed in a chamber at $-40^{\circ}\text{C}$ for 240 hours                                   |   |
| 3   | Humidity test    | After being placed in a chamber at $+40^{\circ}\text{C}$ and $90\pm 5\%$ relative humidity for 240 hours |   |
| 4   | Temp. cycle test | <p>The part shall be subjected to 5 cycles. One cycle shall consist of::</p>                             |   |

## G. RELIABILITY TEST

| No. | Item                | Test condition   | Evaluation  |
|-----|---------------------|--|---|
| 1   | Operating life test | 1.Continuous life test<br>48 hours continuous operation at +70°C with rated voltage applied.<br>2.Intermittent life test<br>A duty cycle of 1 minute on, 1 minutes off, a minimum of 5000 times at room temp.( +25±2°C)and rated voltage applied | Being placed for 4 hours at +25°C , buzzer shall be measured. The value of oscillation frequency/ current consumption should be in ±10% compared with initial ones .The SPL should be in ±10dB compared with initial one. |

### TEST CONDITION.

Standard Test Condition: a) Temperature : +5 ~ +35°C b) Humidity : 45-85% c) Pressure : 860-1060mbar  
 Judgement Test Condition: a) Temperature : +25 ± 2°C b) Humidity : 60-70% c) Pressure : 860-1060mbar