



# Datasheet

## RS PRO Piezo Audio Indicator

EN

RS Stock: 181-2707



### A. SCOPE

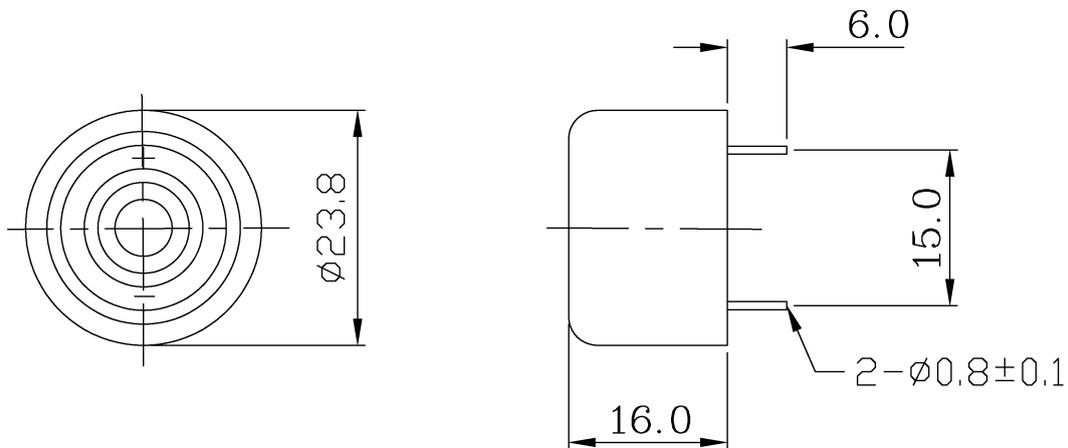
This specification applies piezo audio indicator, 1812660

### B. SPECIFICATION

| No. | Item                                | Unit  | Specification                          | Condition  |
|-----|-------------------------------------|-------|--|--|
| 1   | Resonant frequency                  | KHz   | 2.9 ± 0.5                              |  |
| 2   | Operating Volt. range               | VDC   | 3 ~ 20                                 |  |
| 3   | Current consumption                 | mA    | MAX 6                                  | at 12VDC   |
| 4   | Sound pressure level                | dB    | MIN 78                                 | at 30cm/12VDC  |
| 5   | Rated Voltage                       | VDC   | 12                                     |  |
| 6   | Tone                                |       | Continuous<br>直音                       | at 12VDC   |
| 7   | Operating temp.                     | °C    | -30 ~ +85                              |  |
| 8   | Storage temp.                       | °C    | -40 ~ +95                              |  |
| 9   | Dimension                           | mm    | φ 23.8 x H16.0                         | See appearance drawing                                       |
| 10  | Weight (MAX)                        | gram  | 7.0                                    |  |
| 11  | Material                            |       | ABS UL-94 1/16" HB HIGH HEAT<br>(GRAY) |  |
| 12  | Terminal                            |       | Pin type<br>(Plating Sn)               | See appearance drawing                                       |
| 13  | Environmental Protection Regulation |       | RoHS                                   |  |
| 14  | Storage life                        | month | 6                                      | 6 months preservation at room temp.<br>(25±3°C), Humidity40% |



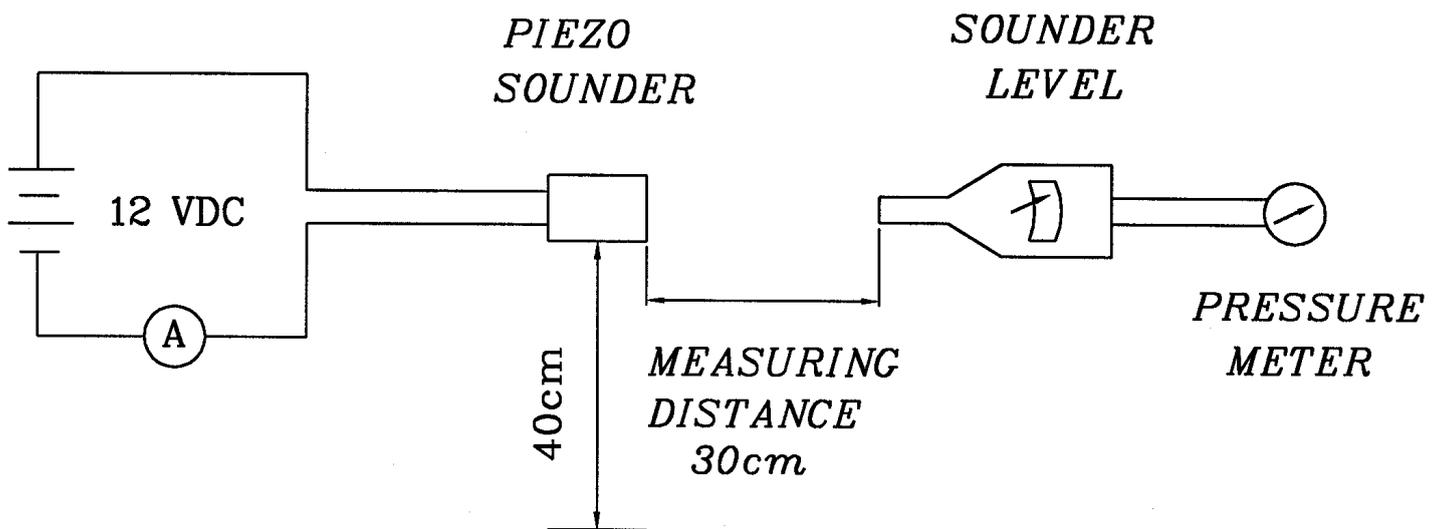
### C. APPEARANCE DRAWING



Tol :  $\pm 0.5$

Unit : mm

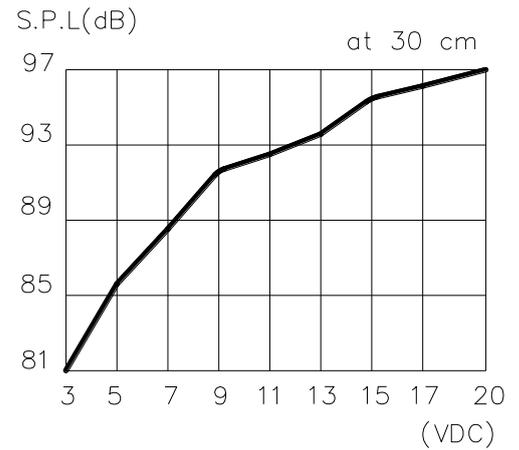
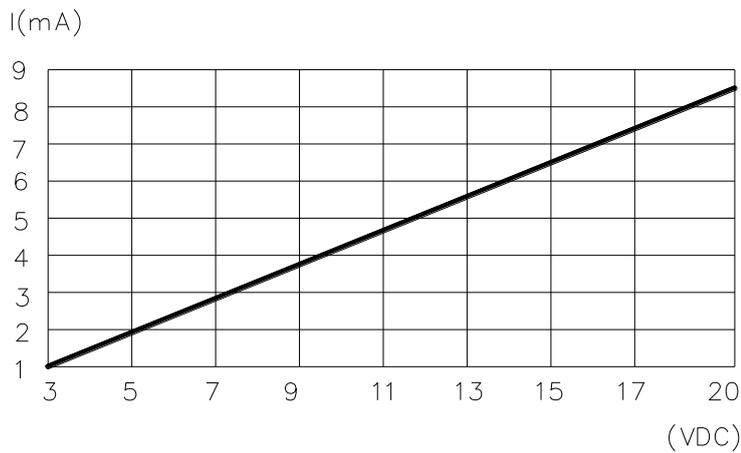
### D. Measuring Method



1. S.P.L. Measuring Circuit

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

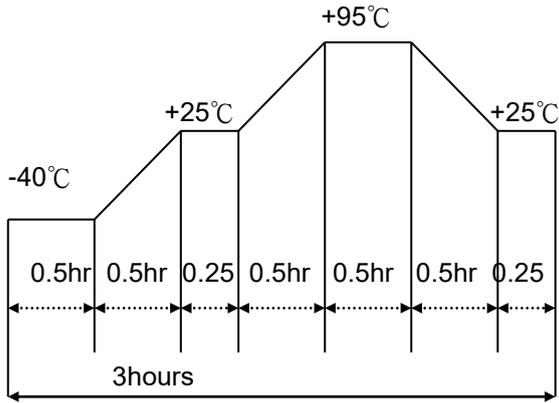
## E.VOLTAGE: SOUND PRESSURE LEVEL / VOLTAGE: CURRENT CONSUMPTION CHARACTERISTICS



## F. 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>   |  |

## G. ENVIRONMENT TEST

| No. | Item             | Test Condition  | Evaluation standard  |
|-----|------------------|---|--|
| 1   | High temp. test  | After being placed in a chamber at +95°C for 240 hours  | 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. |
| 2   | Low temp. test   | After being placed in a chamber with -40°C for 240 hours  |  |
| 3   | Humidity test    | After being placed in a chamber at +40°C and 90±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>  <p>The diagram illustrates a temperature cycle test profile. It starts at -40°C for 0.5hr, ramps up to +25°C in 0.5hr, holds at +25°C for 0.25hr, ramps up to +95°C in 0.5hr, holds at +95°C for 0.5hr, ramps down to +25°C in 0.5hr, and holds at +25°C for 0.25hr. The total duration of one cycle is 3 hours. This cycle is repeated 5 times.</p> |  |

## H. RELIABILITY TEST

| No. | Item                | Test condition  | Evaluation standard  |
|-----|---------------------|---|--|
| 1   | Operating life test | <p>1. Continuous life test<br/>48hours continuous operation at +70°C with rated voltage applied.</p> <p>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.</p> | 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%  
Judgement Test Condition: a) Temperature : +25 ± 2°C b) Humidity : 60-70%

c) Pressure : 860-1060mbar  
c) Pressure : 860-1060mbar