

Datasheet

RS PRO Piezo Audio Indicator

EN

RS Stock No: 181-2756



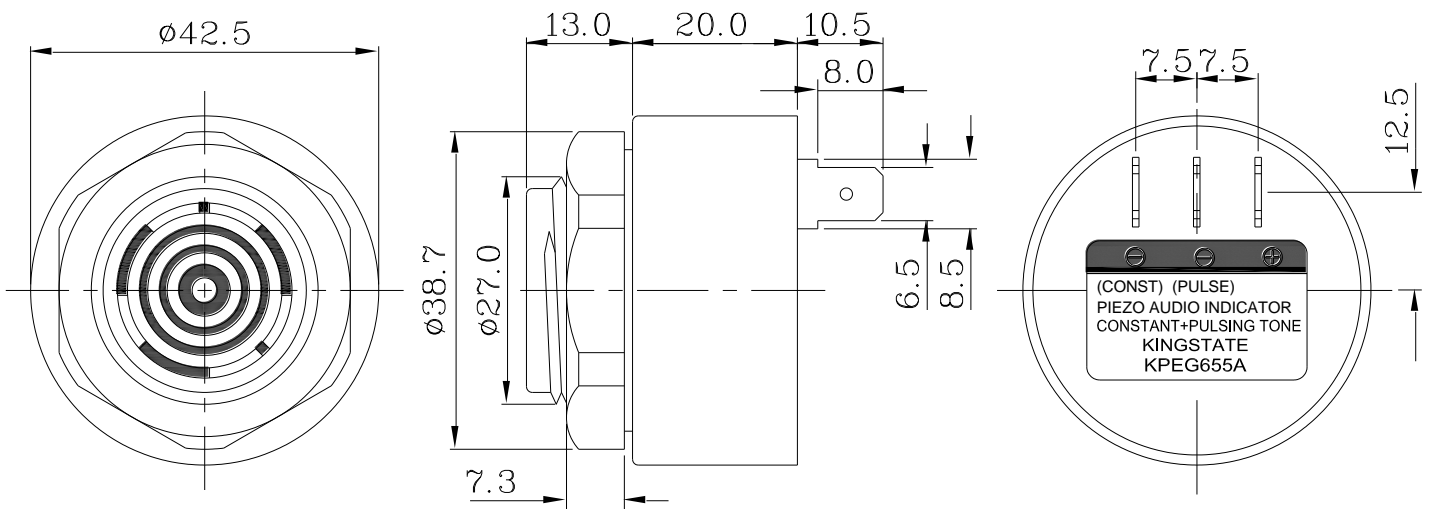
A. SCOPE

This specification applies piezo audio indicator 1812678

B. SPECIFICATION

| No. | Item | Unit | Specification | | Condition |
|-----|-------------------------------------|-------|---|---------------------------|---|
| 1 | Resonant frequency | KHz | 2.8 ± 0.5 | | |
| 2 | Operating Volt. range | VDC | 6 ~ 28 | | |
| 3 | Current consumption | mA | MAX.13 | MAX.11 | at 12VDC |
| 4 | Sound pressure level | dB | MIN.92 | MIN. 87 | at 30cm/12VDC |
| 5 | Rated Voltage | VDC | 12 | | |
| 6 | Tone | | Continuous | Fast Pulse (3.0Hz±20%) | at 12VDC |
| 7 | Operating temp. | °C | -30 ~ +85 | | |
| 8 | Storage temp. | °C | -40 ~ +95 | | |
| 9 | Dimension | mm | φ 42.5 x H33.0 | | See appearance drawing |
| 10 | Weight (MAX) | gram | 35.0 | | |
| 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% |

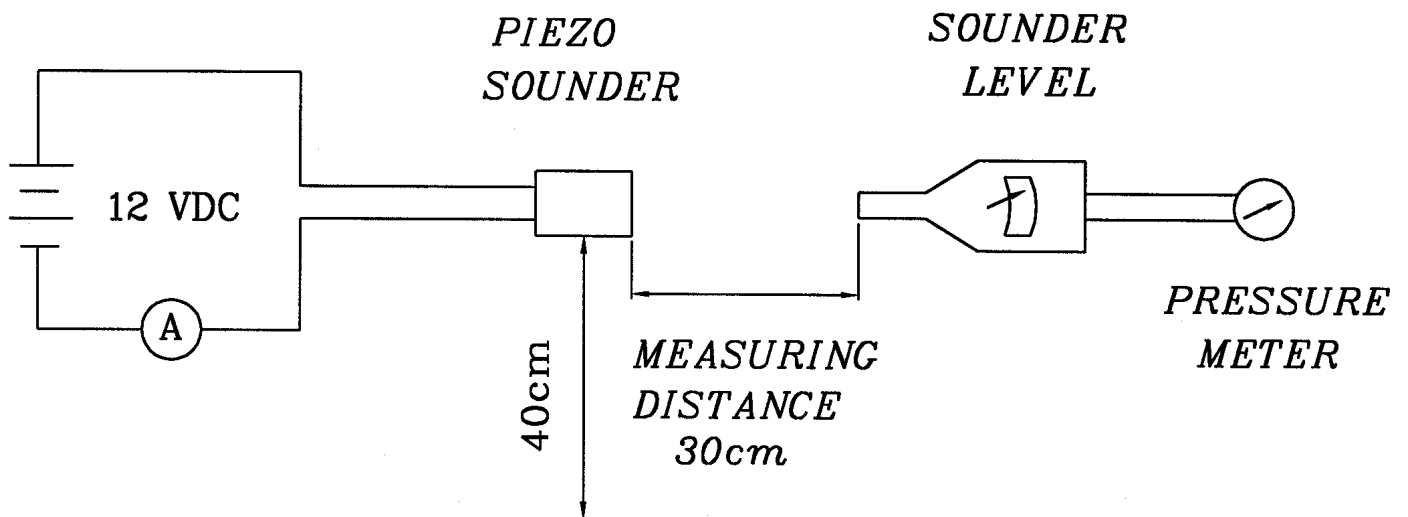
C. APPEARANCE DRAWING



Tol: ± 0.5

Unit: mm

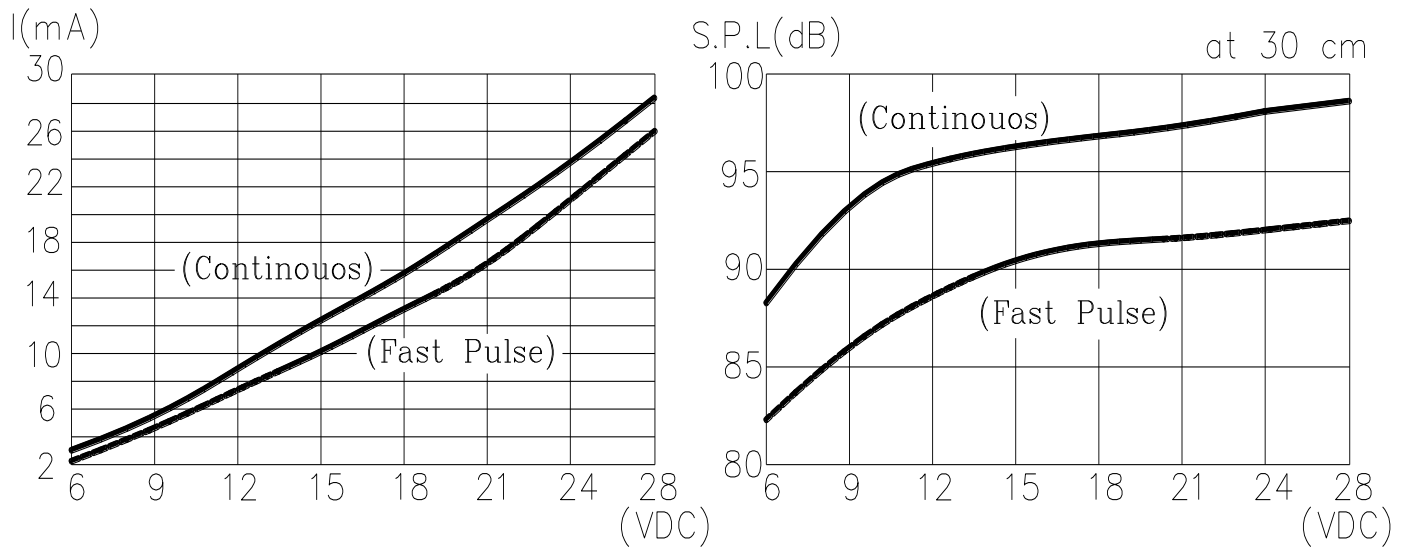
D. Measuring Method



1. S.P.L. Measuring Circuit

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

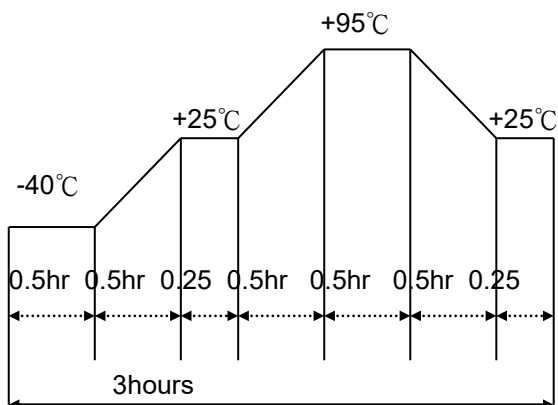
E. VOLTAGE: SOUND PRESSURE LEVEL / VOLTAGE: CURRENT CONSUMPTION CHARACTERISTICS



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 ± 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 ± 0.5 seconds or $+260\pm 5^{\circ}\text{C}$ for 10 ± 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 | 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). | |

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 at -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>  | |

H. RELIABILITY TEST

| No. | Item | Test condition | Evaluation standard |
|-----|---------------------|---|--|
| 1 | Operating life test | <p>1. Continuous life test 48 hours continuous operation at +70°C with rated voltage applied.</p> <p>2. Intermittent life test 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% c) Pressure : 860-1060mbar
 Judgement Test Condition: a) Temperature : +25 ± 2°C b) Humidity : 60-70% c) Pressure : 860-1060mbar