



# Datasheet

## RS PRO Piezo Audio Indicator

EN



### A. SCOPE

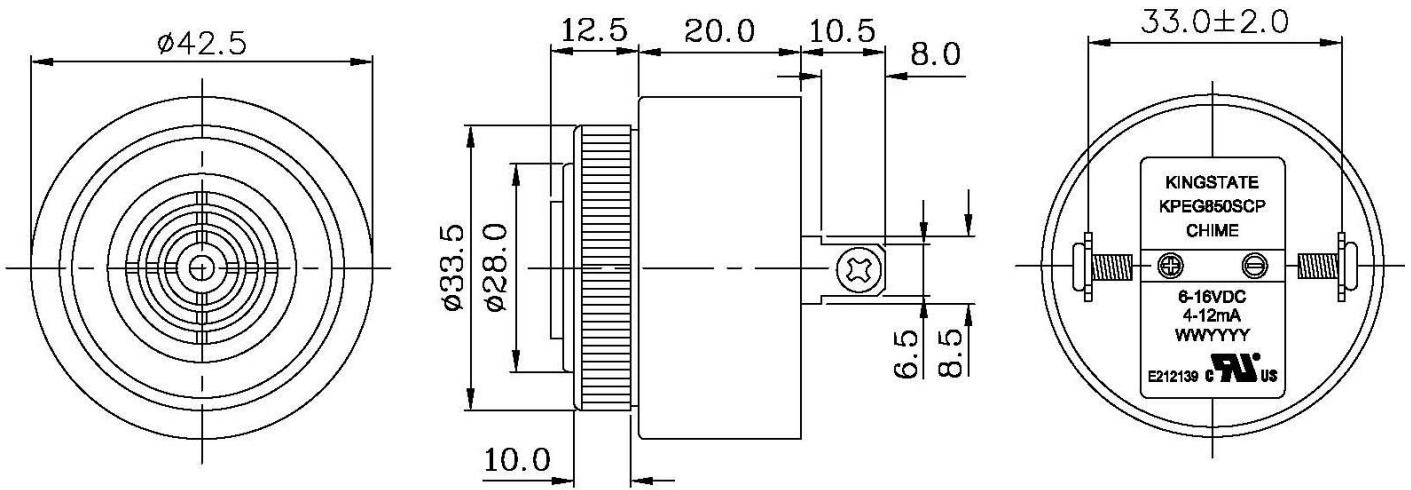
This specification applies piezo audio indicator, 1812699

### B. SPECIFICATION

No.	Item	Unit	Specification	Condition		
1	Resonant frequency	KHz	2.9 ± 0.5			
2	Operating Volt. range	VDC	6 ~ 16			
3	Current consumption	mA	MAX 4	MAX 12	at 6VDC	at 16VDC
			MAX 11		at 12VDC	
4	Sound pressure level	dB	MIN 68	MIN 78	at 60cm/6VDC	at 60cm/16VDC
			MIN 70		at 60cm/12VDC	
5	Rated Voltage	VDC	12			
6	Tone		Chime ( 0.5Hz±20% )	at 12VDC		
7	Operating temp.	°C	-30 ~ +85			
8	Storage temp.	°C	-40 ~ +85			
9	Dimension	mm	φ 42.5 x H32.5	See appearance drawing		
10	Weight (MAX)	gram	58.0			
11	Material		NYLON UL-94 V-0 ( BLACK )			
12	Terminal		Tin-Plated Tapped Screw (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%		



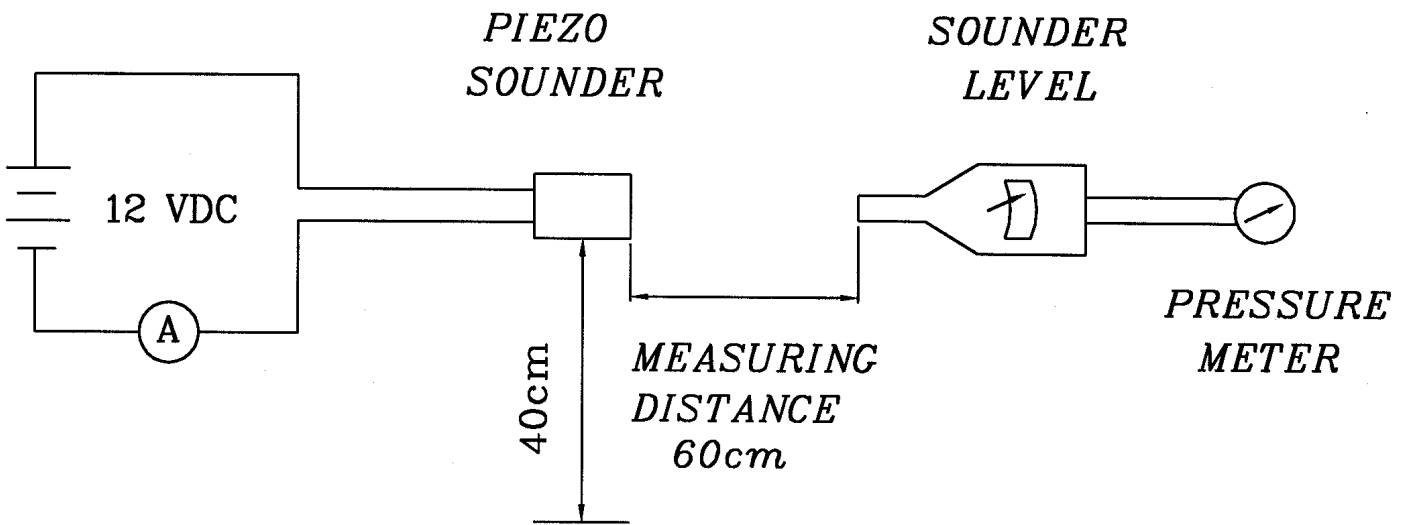
### C. APPEARANCE DRAWING



**Tol: ± 0.5**  
**Unit: mm**

### D. MEASURING METHOD

S.P.L. Measuring Circuit

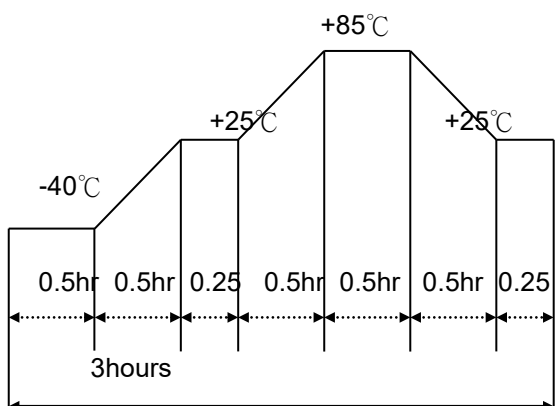


Mic : RION S.P.L meter UC30 or equivalent

## 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 with $-40^{\circ}\text{C}$ 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 be consist of::</p>  <p>The diagram illustrates a temperature cycle test profile. It starts at <math>-40^{\circ}\text{C}</math> for 0.5hr, then ramps up to <math>+25^{\circ}\text{C}</math> in 0.5hr, dwells at <math>+25^{\circ}\text{C}</math> for 0.25hr, ramps up to <math>+85^{\circ}\text{C}</math> in 0.5hr, dwells at <math>+85^{\circ}\text{C}</math> for 0.5hr, ramps down to <math>+25^{\circ}\text{C}</math> in 0.5hr, dwells at <math>+25^{\circ}\text{C}</math> for 0.5hr, and finally ramps down to <math>-40^{\circ}\text{C}</math> in 0.25hr. The total duration of one cycle is 3 hours.</p>	

## G. RELIABILITY TEST

No.	Item	Test condition	Evaluation
1	Operating life test	1. Continuous life test 250 hours continuous operation at +85°C with rated voltage applied. 2. Intermittent life test A duty cycle of 1 minute on, 5 minutes off, a minimum of 10000 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