



Datasheet

RS PRO Piezo Audio Transducer

EN



A. SCOPE

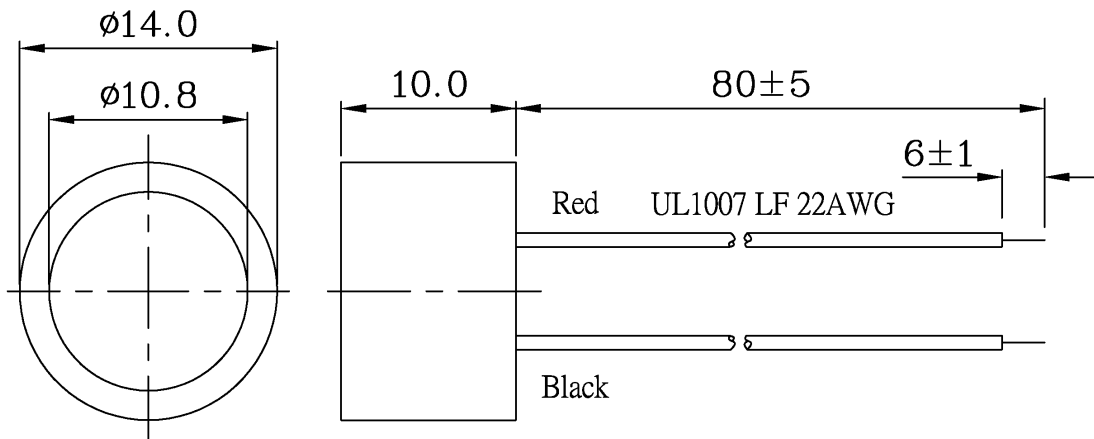
This specification applies piezo audio indicator, 1812676

B. SPECIFICATION

No.	Item	Unit	Specification	Condition
1	Operating Frequency	KHz	5.0 ± 0.5	
2	Operating Volt. range	VDC	9 ~ 16	
3	Current consumption	mA	MAX 35	at 12VDC
4	Sound pressure level	dB	MIN 80	at 30cm/12VDC
5	Rated Voltage	VDC	12	
6	Tone		Continuous	at 12VDC
7	Operating temp.	°C	-30~ + 85	
8	Storage temp.	°C	-40 ~ +95	
9	Dimension	mm	φ 14.0 x H10.0	See appearance drawing
10	Weight (MAX)	gram	10.0	
11	Material		ABS UL-94 1/16" HB HIGH HEAT (BLACK)	
12	Terminal		Wire type	See appearance drawing
13	Environmental Protection Regulation		RoHS	
14	Dustproof and waterproof level		IP67	IEC standard 529 edition 2.0(1989)



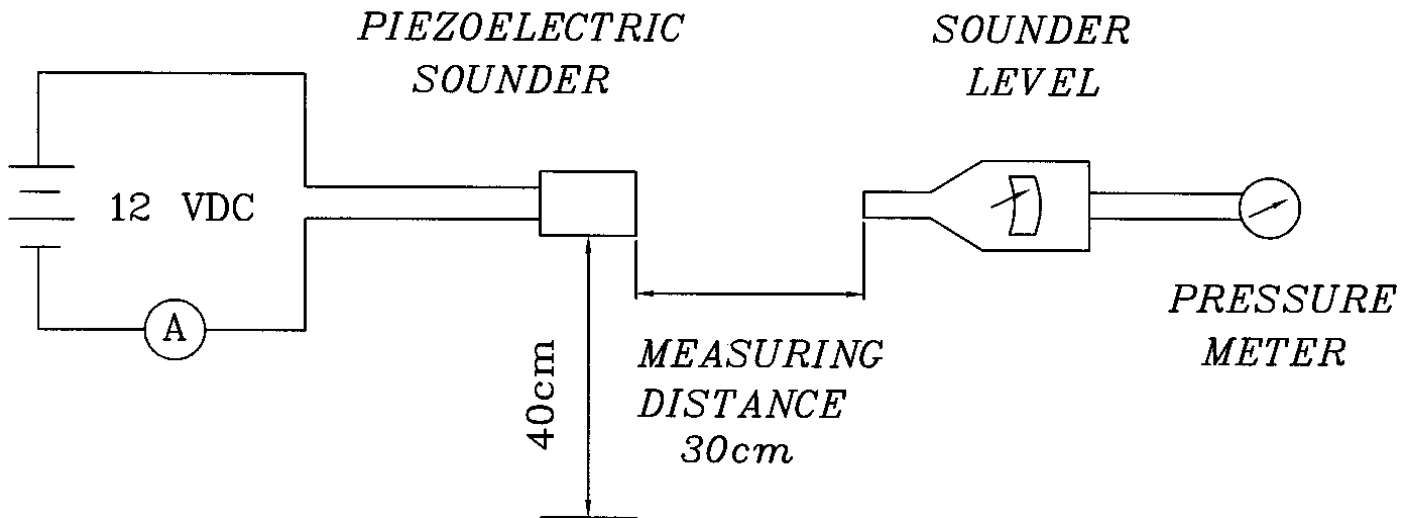
C. APPEARANCE DRAWING



Tol: ± 0.5
Unit: mm

D. MEASURING METHOD

S.P.L. Measuring Circuit

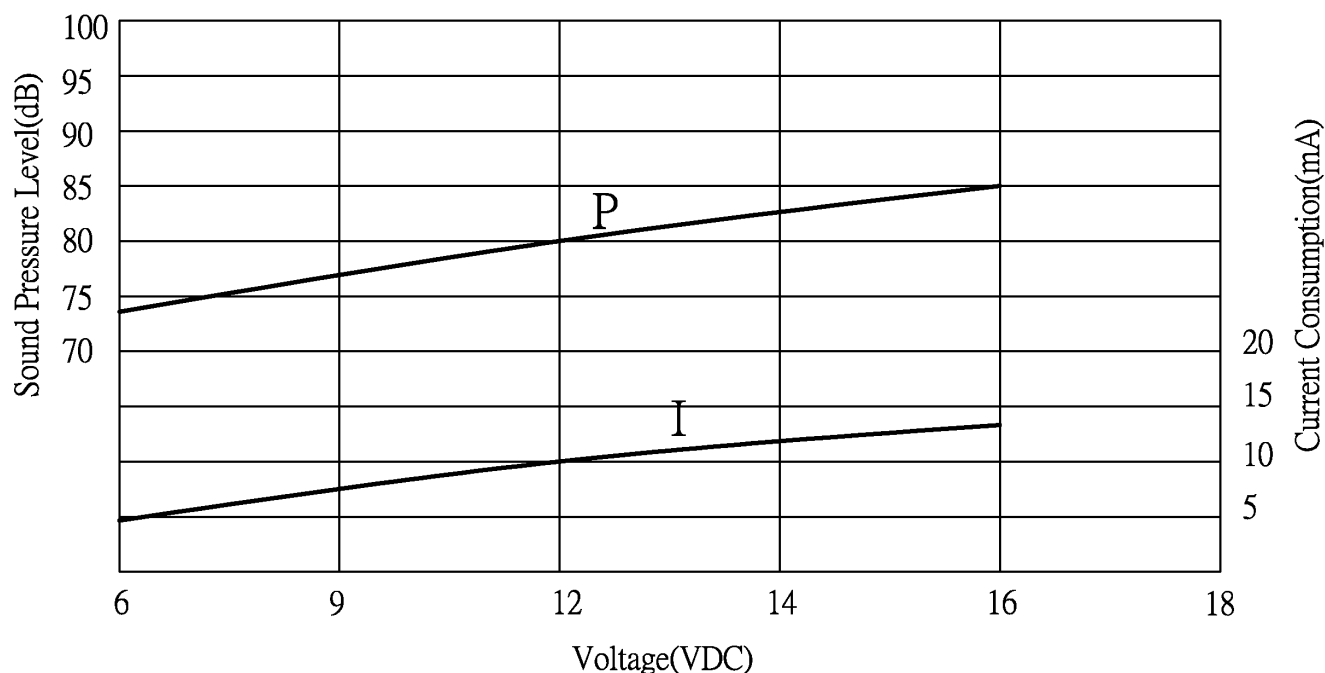


Mic : RION S.P.L meter UC30 or equivalent

S.G : Hewlett Packard 33120A Function Generator or equivalent

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

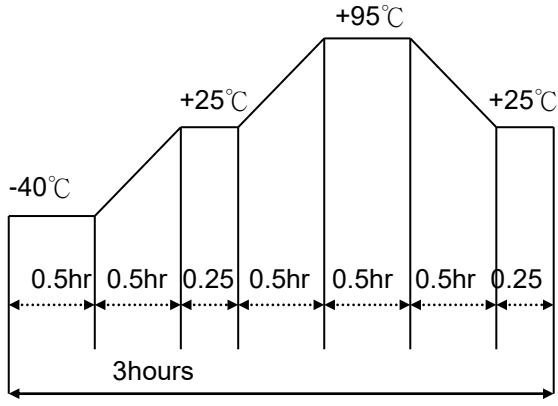
at 30cm



F. MECHANICAL CHARACTERISTICS

No.	Item	Test Condition	Evaluation standard
1	Solderability (Connector excepted)	Stripped wires of lead wires are immersed in rosin for 5 seconds and then immersed in solder bath of $+270\pm 5^{\circ}\text{C}$ for 3 ± 0.5 seconds.	90% min. stripped wires shall be wet with solder. (Except the edge of terminal)
2	Lead Wire Pull Strength	The pull force shall be applied to double lead wire : Horizontal 3.0N(0.306kg) for 30 seconds. Vertical 2.0N(0.204kg) for 30 seconds.	No damage and cutting off.
3	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 $\pm 10\%$ compared with initial ones .The SPL should be in $\pm 10\text{dB}$ compared with initial one.
4	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 be consist of :</p>  <p>The diagram shows a temperature profile for a 3-hour cycle. It starts at -40°C for 0.5hr, then ramps up to +25°C in 0.5hr. It dwells at +25°C for 0.25hr, then ramps up to +95°C in 0.5hr. It dwells at +95°C for 0.5hr, then ramps down to +25°C in 0.5hr. It dwells at +25°C for 0.25hr. The total cycle duration is 3 hours.</p>	

H. RELIABILITY TEST

No.	Item	Test condition	Evaluation
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 ±13dB 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