



Datasheet

RS PRO Piezo Audio Indicator

EN

RS Stock No: 181-2729



A.SCOPE

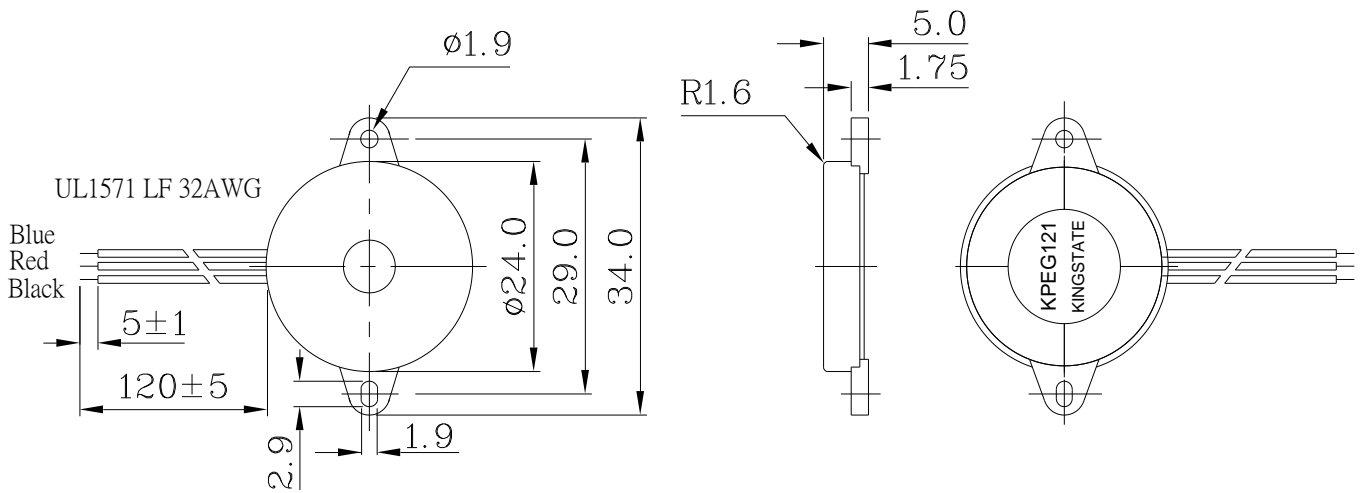
This specification applies piezo audio transducer, 1812653

B.SPECIFICATION

No.	Item	Unit	Specification	Condition
1	Resonant frequency	KHz	4.5 ± 0.5	
2	Operating Volt. range	VDC	3 ~ 28	
3	Current consumption	mA	MAX 13	at 12VDC
4	Sound pressure level	dB	MIN 83	at 30cm/12VDC
5	Rated Voltage	VDC	12	
6	Tone		Continuous	
7	Operation temp.	°C	-30 ~ + 85	
8	Storage temp.	°C	-40 ~ + 95	
9	Dimension	mm	φ 24.0 x H5.0	See appearance drawing
10	Weight (MAX)	gram	7.4	
11	Material		ABS UL-94 1/16" HB HIGH HEAT (BLACK)	
12	Terminal		Wire type	See appearance drawing
13	Environmental Protection Regulation		RoHS	



C. APPEARANCE DRAWING

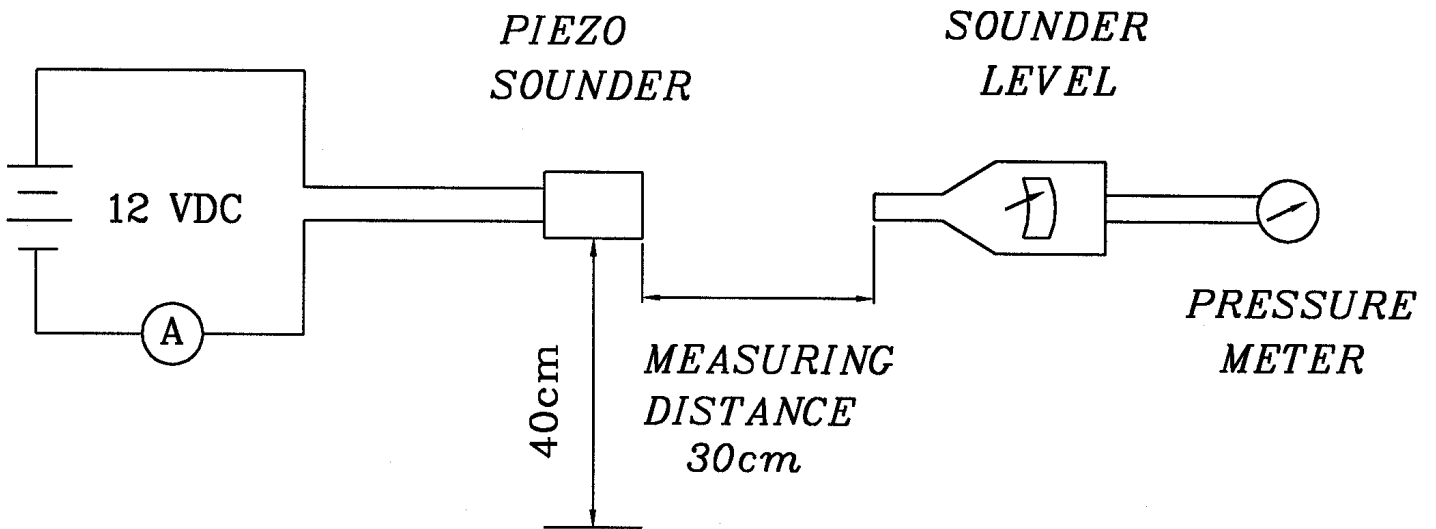


Tol : ± 0.5

Unit : mm

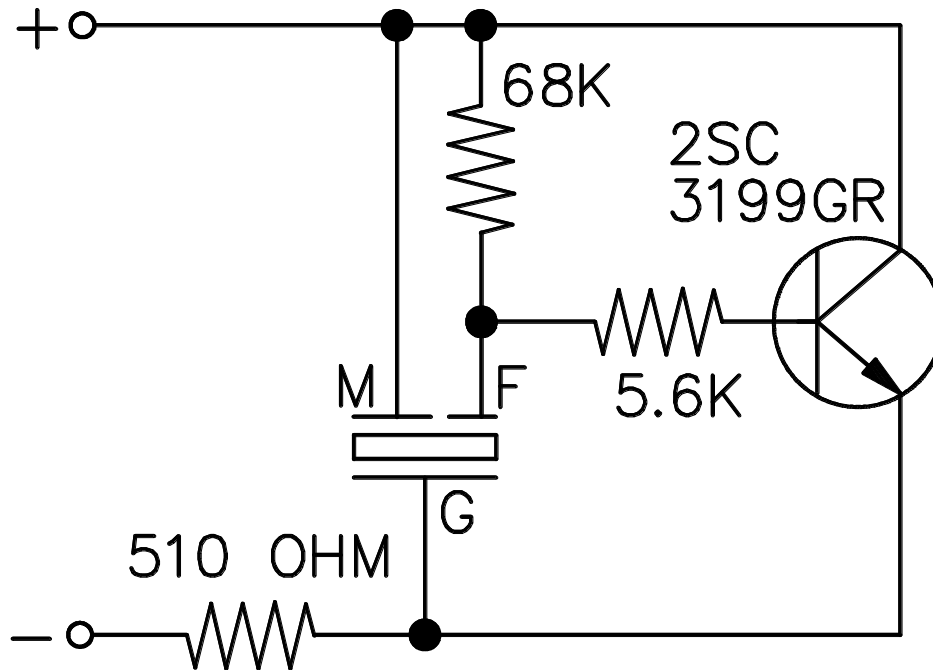
D. Measuring Method

1. S.P.L. Measuring Circuit



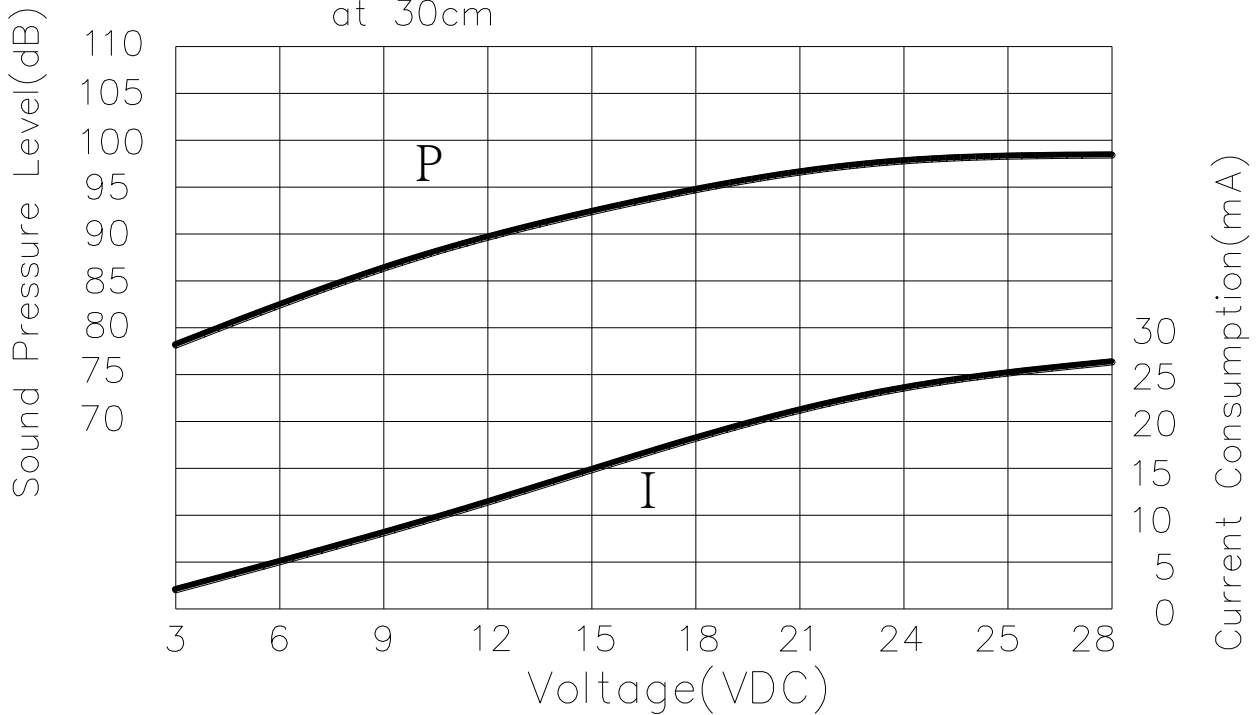
Mic : RION S.P.L meter UC30 or equivalent

2.The current consumption and the sound pressure level are measured by using the recommend driving circuit shown as below (one example)



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

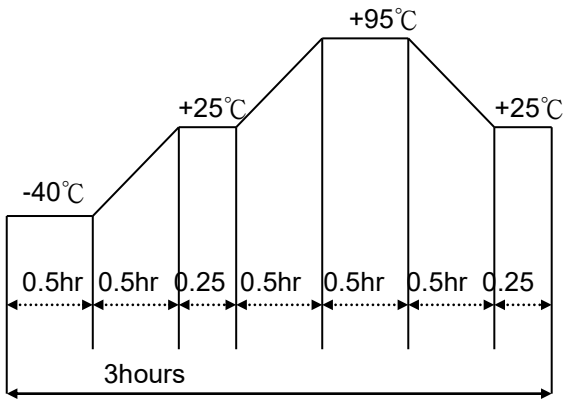
at 30cm



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 $+95^{\circ}\text{C}$ 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°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	The part shall be subjected to 5 cycles. One cycle shall be consist of:  The diagram shows a temperature profile over 3 hours. It starts at -40°C for 0.5hr, then ramps up to $+25^{\circ}\text{C}$ in 0.5hr, stays at $+25^{\circ}\text{C}$ for 0.25hr, ramps up to $+95^{\circ}\text{C}$ in 0.5hr, stays at $+95^{\circ}\text{C}$ for 0.5hr, ramps down to $+25^{\circ}\text{C}$ in 0.5hr, stays at $+25^{\circ}\text{C}$ for 0.25hr, and finally ramps down to -40°C in 0.5hr. The total duration is 3 hours.	

H. RELIABILITY TEST

No.	Item	Test condition	Evaluation standard
1	Operating life test	1. Continuous life test 48 hours continuous operation at +70°C with rated voltage applied. . 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. .	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