Datasheet

RS PRO Piezo Audio Transducer

EN

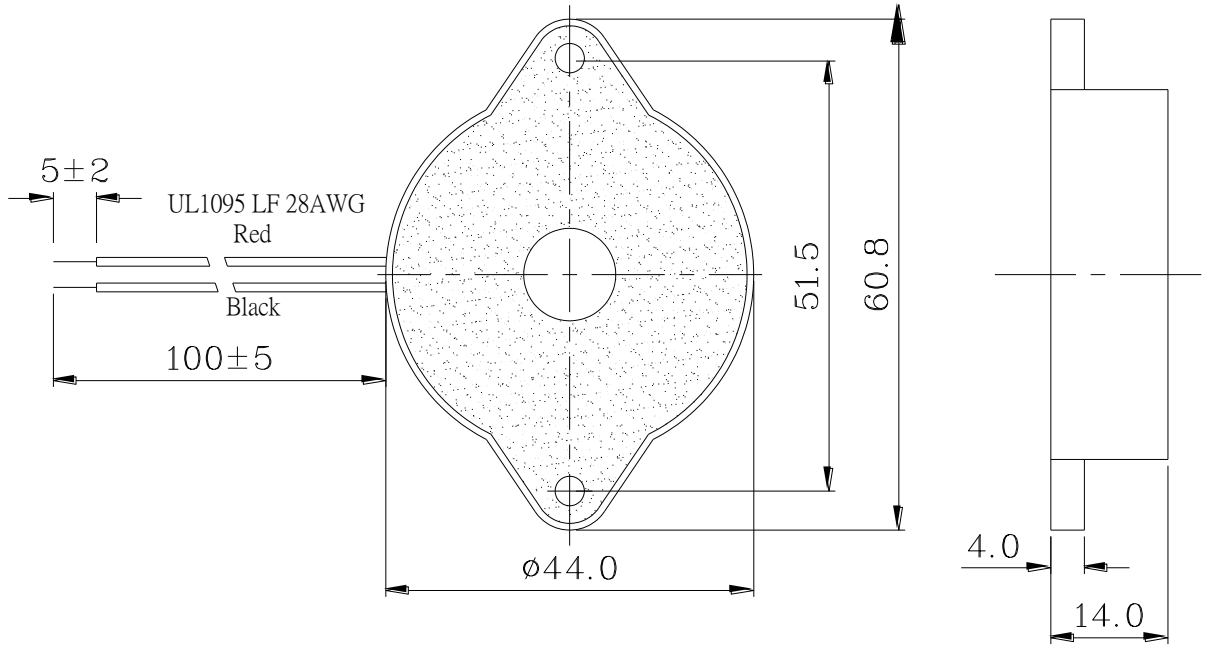
A.SCOPE

This specification applies piezo audio transducer, 1812651

B. SPECIFICATION

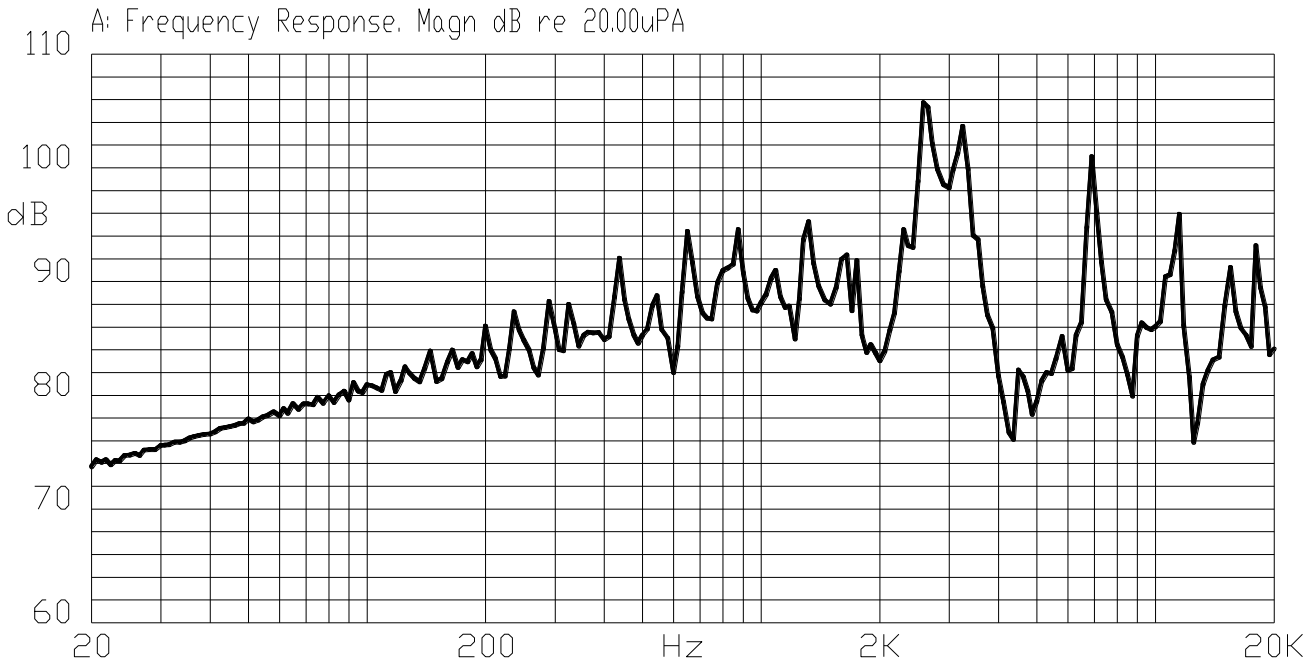
No.	Item	Unit	Specification	Condition
1	Operating Volt. MAX	Vp-p	MAX 50	
2	Current consumption	mA	MAX 10	at 10Vp-p,square wave,800Hz.
3	Sound pressure level	dB	MIN 80	at 10cm/10Vp-p,square wave,800Hz
4	Electrostatic capacity	pF	70,000 ± 30%	at 120Hz/1V
5	Operating temp.	℃	-30 ~ +80	
6	Storage temp.	℃	-40 ~ +80	
7	Dimension	mm	ϕ60.8 x H14.0	See appearance drawing
8	Weight (MAX)	gram	12.0	
9	Material		PA -777D （BLACK）	
10	Terminal		Wire type	See appearance drawing
11	Environmental Protection Regulation		RoHS	

C. APPEARANCE DRAWING

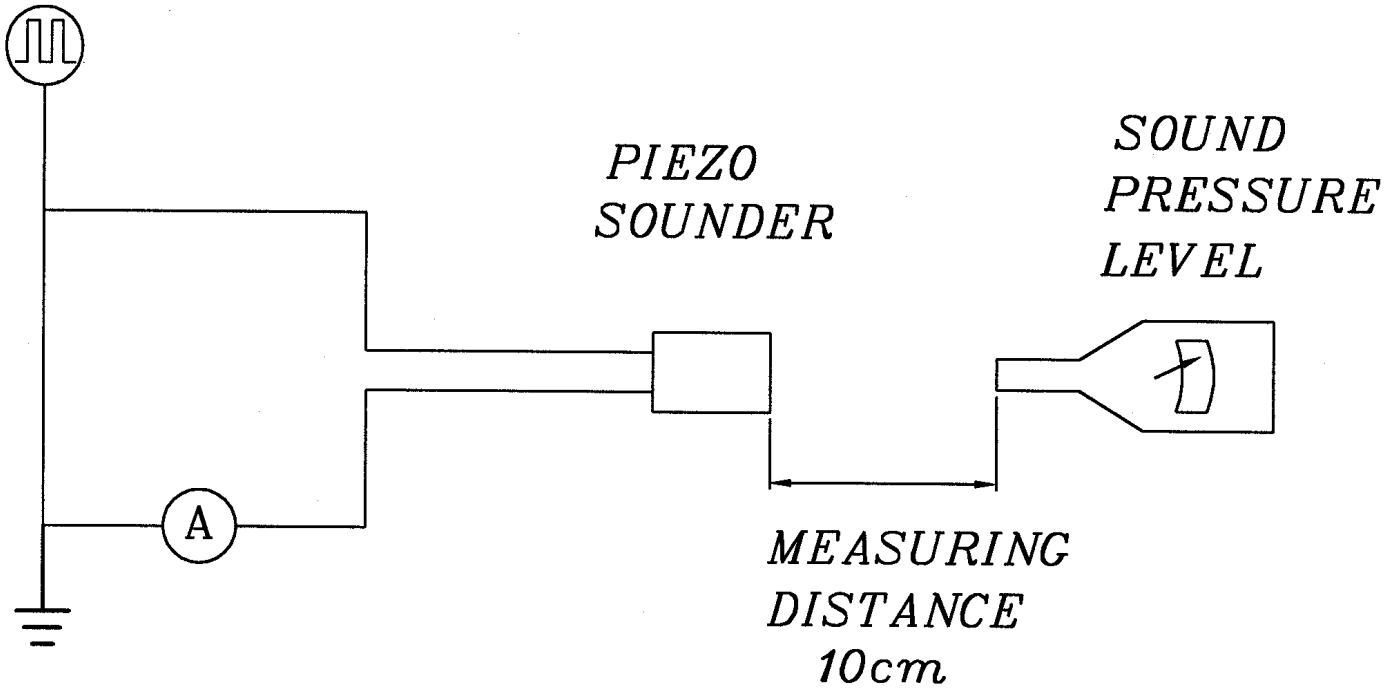


Tol: ± 0.5
Unit: mm

D. TYPICAL FREQUENCY RESPONSE CURVE
E. MEASURING METHOD



S.P.L. Measuring Circuit
Input Signal: 10Vp-p,800Hz, Square Wave

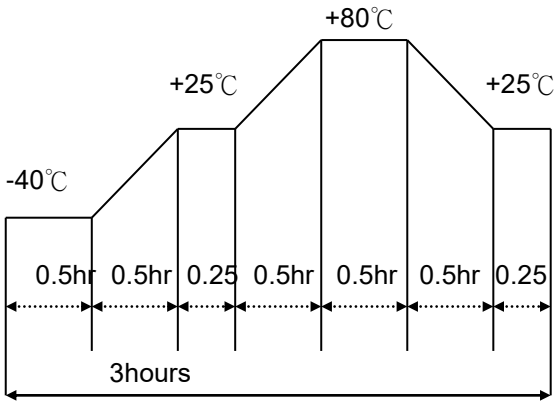


Mic : RION S.P.L meter UC30 or equivalent
S.G : Hewlett Packard 33120A Function Generator or equivalent

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±5℃ 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 ±10% compared with initial ones .The SPL should be in ±10dB 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 +80℃ for 240 hours	Being placed for 4 hours at +25℃, 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℃ for 240 hours	
3	Humidity test	After being placed in a chamber at +40℃ and 90±5% relative humidity for 240 hours	
4	Temp. cycle test	The part shall be subjected to 5 cycles. One cycle shall be consist of：  	

H. RELIABILITY TEST

No.	Item	Test condition	Evaluation standard
1	Operating life test	1.Continuous life test 48 hours continuous operation at +65℃ 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℃)and rated voltage applied.	Being placed for 4 hours at +25℃, 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℃ b) Humidity : 45-85% c) Pressure : 860-1060mbar

Judgement Test Condition: a) Temperature : +25 ± 2℃ b) Humidity : 60-70% c) Pressure : 860-1060mbar