



Datasheet

RS PRO Piezo Audio Transducer

EN

RS Stock: 181-2709



A. SCOPE

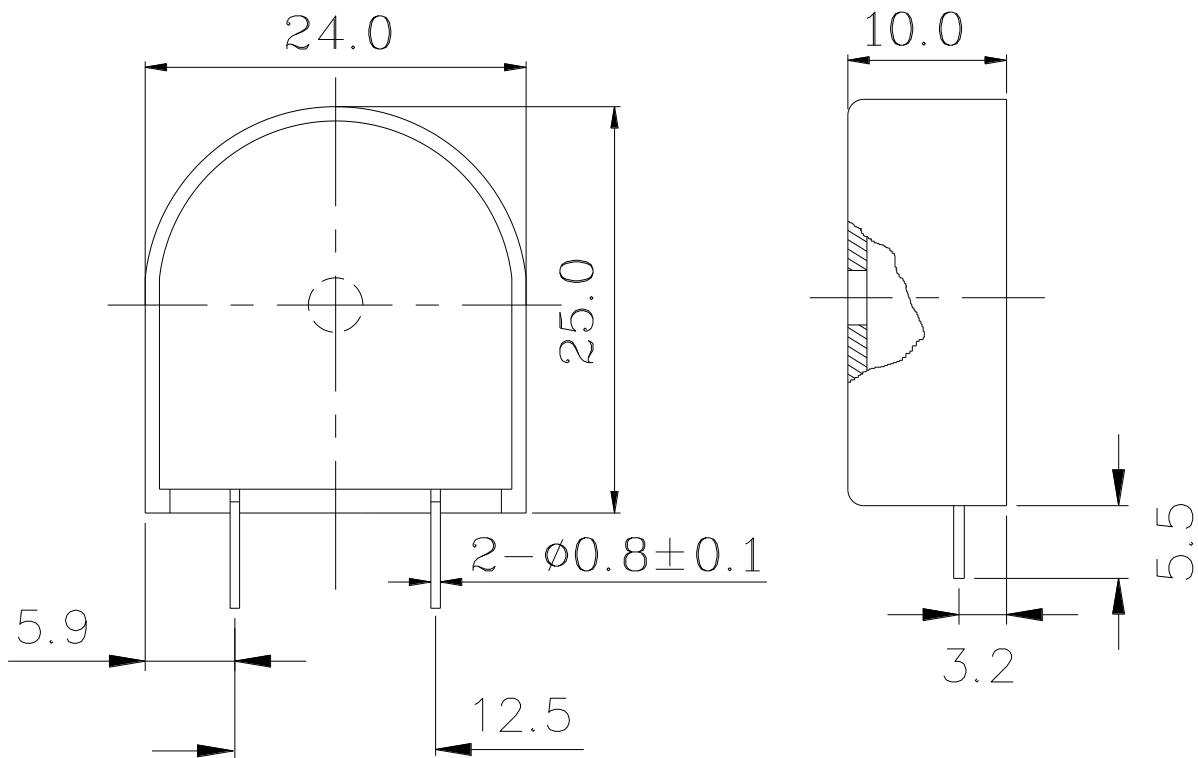
This specification applies piezo audio transducer, 1812648

B. SPECIFICATION

No.	Item	Unit	Specification	Condition
1	Operating Volt.	Vp-p	MAX 30	
2	Current consumption	mA	MAX 10	at 10Vp-p,square wave,3.3KHz.
3	Sound pressure level	dB	MIN 93	at 10cm/10Vp-p,square wave,3.3KHz.
4	Electrostatic capacity	pF	17,000 ± 30%	at 1KHz/1V
5	Operating temp.	°C	-30 ~ +115	
6	Storage temp.	°C	-40 ~ +125	
7	Dimension	mm	L25.0 x W24.0 x H10.0	See appearance drawing
8	Weight (MAX)	gram	3.7	
9	Material		PC 10%GLASS (BLACK)	
10	Terminal		Pin type (Plating Au)	See appearance drawing
11	Environmental Protection Regulation		RoHS	



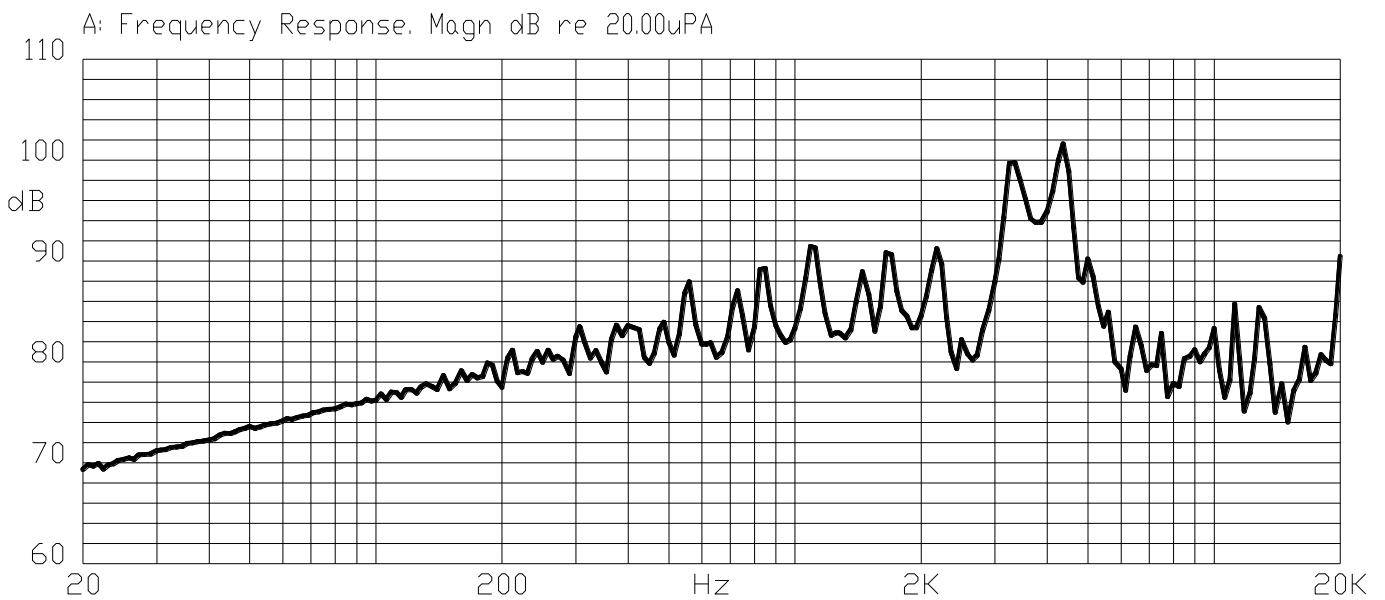
C. APPEARANCE DRAWING



Tol : ± 0.5

Unit: mm

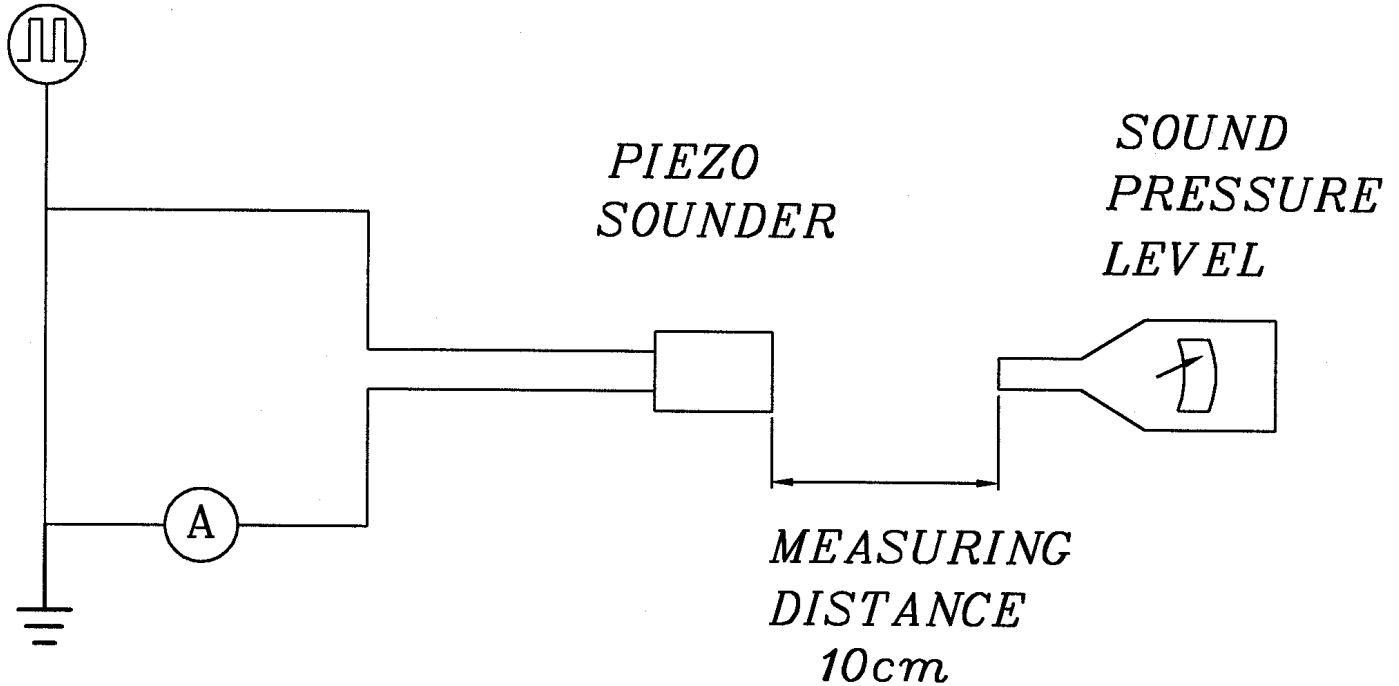
D. TYPICAL FREQUENCY RESPONSE CURVE



E. MEASURING METHOD

S.P.L. Measuring Circuit

Input Signal: 10Vp-p,3.3kHz, 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	Solder ability	Stripped wires of lead wires are immersed in rosin for 5 seconds and then immersed in solder bath of $+230\pm 5^{\circ}\text{C}$ for 3 ± 0.5 seconds.	90% min. stripped wires shall be wet with solder. (Except the edge of terminal)
2	Soldering Heat Resistance	Stripped wires are immersed up to 1.5mm from insulation 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, and then sounder shall be measured after being placed in natural condition for 4 hours..	No interference in operation.
3	Terminal Strength Pulling	The force 10 seconds of 300g 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 $\pm 10\%$ 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).	
6	Inside lead wire pull test	The force 10 seconds of 400g is applied to each terminal in axial direction.	No damage and cutting off.
7	Strength Pulling	The force 1 minutes of 5kg at room temp.($+25\pm 5^{\circ}\text{C}$) is applied to A,B case	No damage and cutting off.

G. ENVIRONMENT TEST

No.	Item	Test Condition	Evaluation standard
1	High temp. test	After being placed in a chamber at +125°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>	

H. RELIABILITY TEST

No.	Item	Test condition	Evaluation
1	Operating life test	<p>1. Continuous life test 2 hours continuous operation at +105°C with 15V applied.</p> <p>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 maximum 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