



soberton inc.

PT PIEZO AUDIO TRANSDUCER

Acoustic Product Specification

Product Number: PT-1403-3



Release | Revision: C/2018

CONTENTS

This document contains the technical specifications for the piezo audio transducer.

Page 1

Specifications

Mechanical Characteristics

Page 2

Environment Test

Reliability Test

Page 3

Inspection Fixture

Frequency Response Curve

Page 4

Dimensions

Page 5

Packing

Specifications

Item	Unit	Specification	Condition
Rated Voltage	Vo-p	9.0	
Operating Volt	Vo-p	2.0 ~ 30.0	
Mean Current	mA	3 Max.	At 9Vp-p, square wave, 5.2KHz
Sound Output	dB	80	At 10cm, 9Vp-p, square wave, 5.2KHz
Capacitance at 30Hz	PF	9400 ±30%	At 120Hz
Rated Frequency	Hz	5.2 ±0.4K	
Operating Temp	°C	-20 ~ +60	
Storage Temp	°C	-30 ~ +70	
Dimension	mm	Ø14×H2.85	See attached drawing
Weight	gram	0.8	
Material		PPO	
Terminal		Wire type	Length: 38mm (UL1571/ AWG32#)
Environmental Protection Regulation		RoHS	

Test condition:

Temperature: +25±2 °C Related humidity: 65±5% Air pressure: 86-106KPa

Mechanical Characteristics

Item	Test condition	Evaluation standard
Solderability	Lead terminals are immersed in rosin for 5 seconds and then immersed in solder bath at +260±5°C for 3±1 seconds	90% min. lead terminals will be wet with solder (Except the edge of terminal)
Lead Wire Pull Strength	The pull force will 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
Vibration	Buzzer will be measured after being applied vibration of amplitude of 1.5mm with 10Hz to 55Hz band of vibration frequency to each of 3 perpendicular directions for 2 hours	After test the part will meet specifications without any damage in appearance and performance except SPL.
Drop test	The part is 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.	The SPL would be in ±10dBA compared with initial one.



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Mechanical Characteristics

Page 2

Environment Test

Reliability Test

Page 3

Inspection Fixture

Frequency Response Curve

Page 4

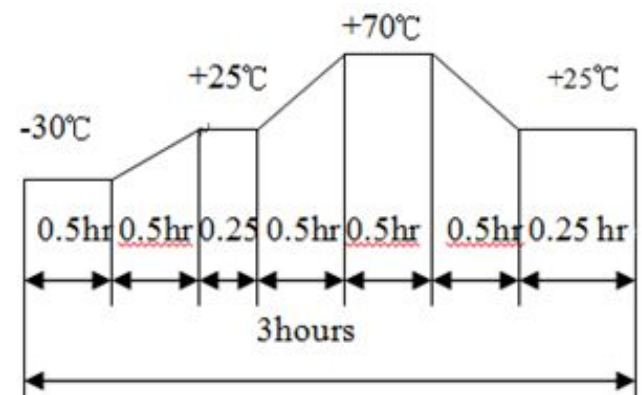
Dimensions

Page 5

Packing

Environment Test

Item	Test condition	Evaluation standard
High temp. test	After being placed in a chamber at +70°C for 96 hours	After test the part will meet specifications without any degradation in appearance and performance except SPL, after 4 hours at +25°C. The SPL will be in ±10dBA compared with initial one.
Low temp. test	After being placed in a chamber at -30°C for 96 hours	
Humidity test	After being placed in a chamber at +70°C and 90±5% relative humidity for 96 hours	
Temp cycle test	The part will be subjected to 5 cycles. One cycle shall consist of:	



Reliability Test

Item	Test condition	Evaluation standard
Operating life test	1. Continuous life test 72 hours continuous operation at +60°C with maximum rated voltage applied	After test, the part will meet specifications without any degradation in appearance and performance except SPL, after 4 hours at +25°C. The SPL would be in±10dBA compared with initial one.
	2. Intermittent life test A duty cycle of 1 minute on, 1 minute off, a minimum of 1000 times at +25±2°C and maximum rated voltage applied	

Standard test condition:

- a) Temperature: +5~+35°C
- b) Humidity: 45~85%
- c) Pressure: 86~106KPa



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Page 1

Specifications

Mechanical Characteristics

Page 2

Environment Test

Reliability Test

Page 3

Inspection Fixture

Frequency Response Curve

Page 4

Dimensions

Page 5

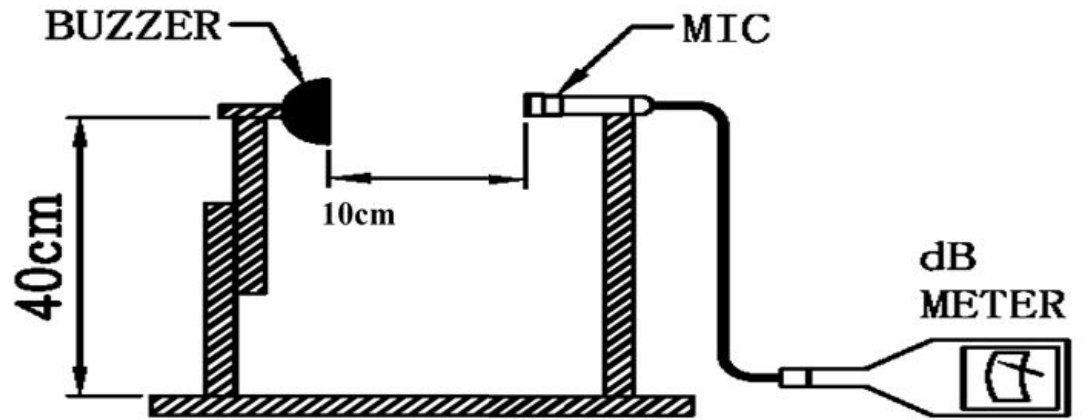
Packing

Inspection Fixture

S.P.L Measuring Circuit

S.P.L Measuring Circuit

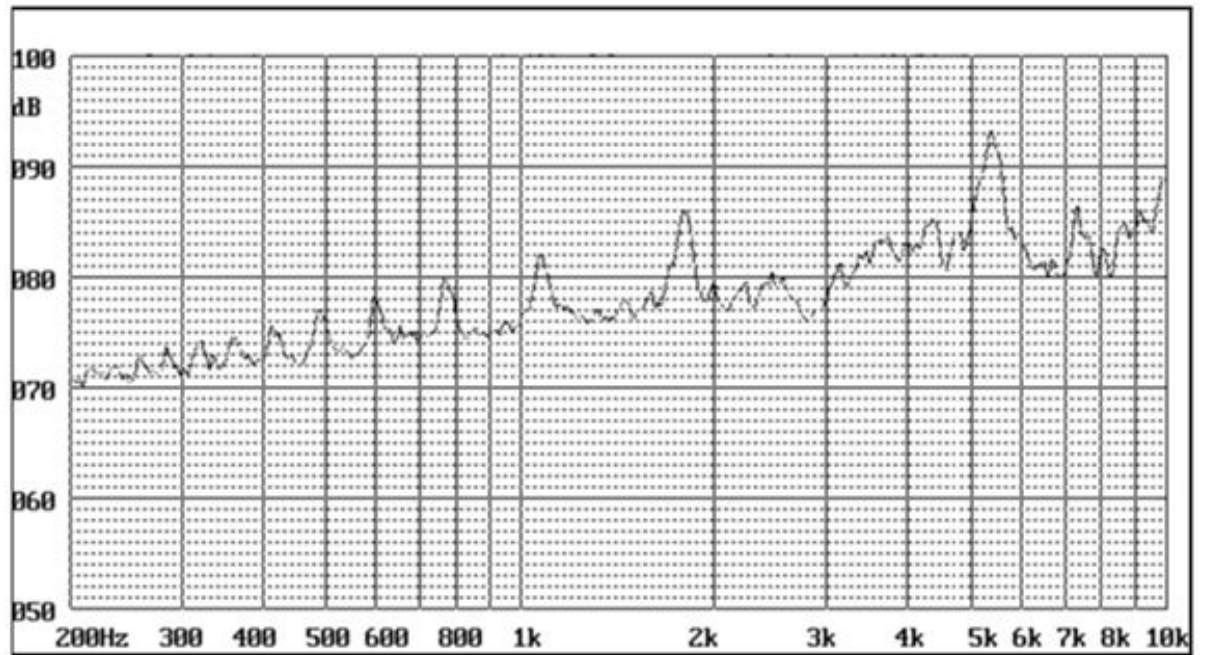
Input Signal: 9.0Vp-p, 5.2KHz, Square Wave



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

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

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Page 2

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Reliability Test

Page 3

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Frequency Response Curve

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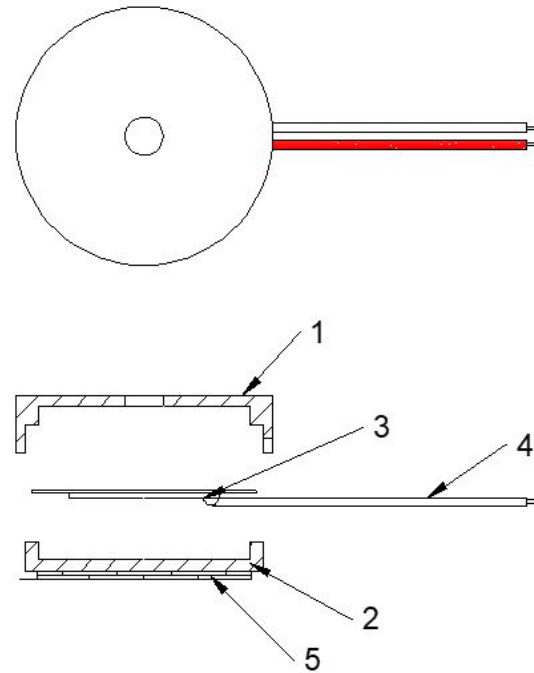
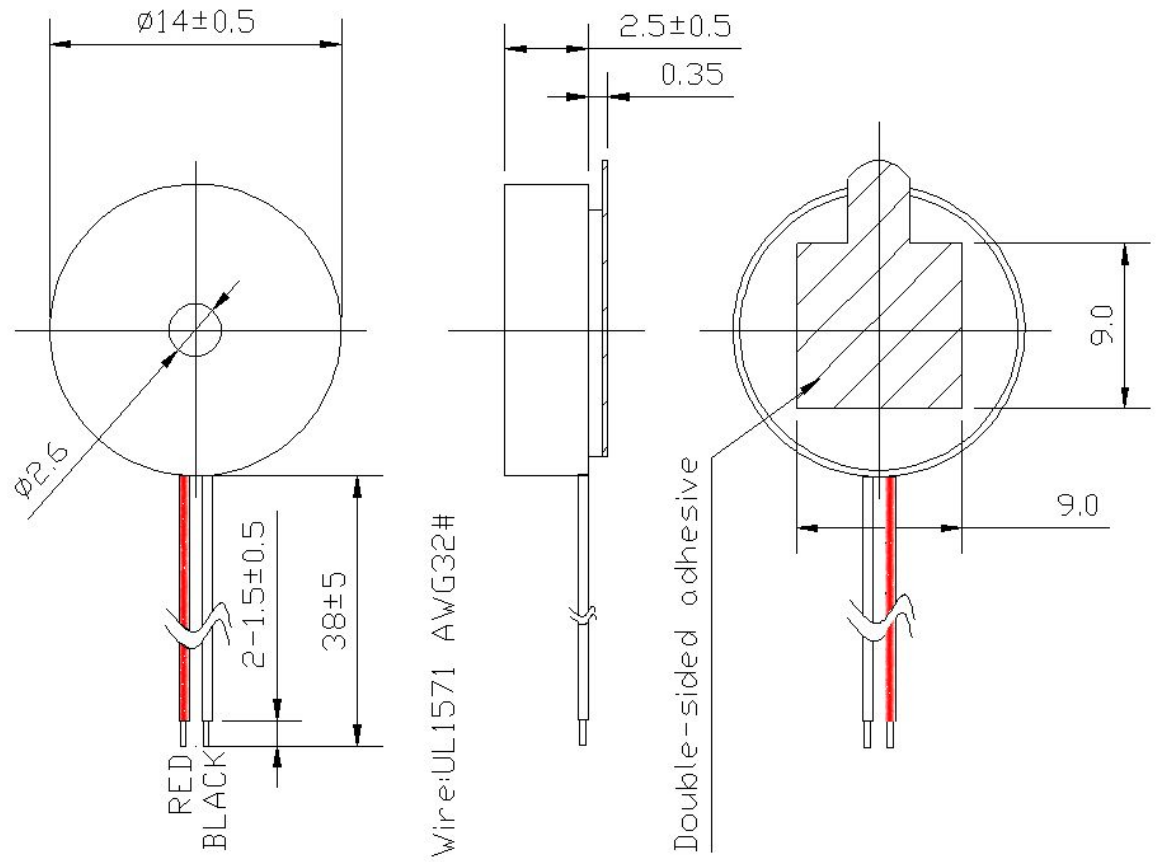
Dimensions

Page 5

Packing

Dimensions

Tolerance: ± 0.5 (unit: mm)



No.	Part Name	Material	Quantity
1	Case	ABS	1
2	Case	ABS	1
3	Piezo	Copper + ceramics	1
4	Wire (38mm)	UL1571/ AWG32#	2
5	Double Faced Adhesive Tape	AcR+Off type paper	1



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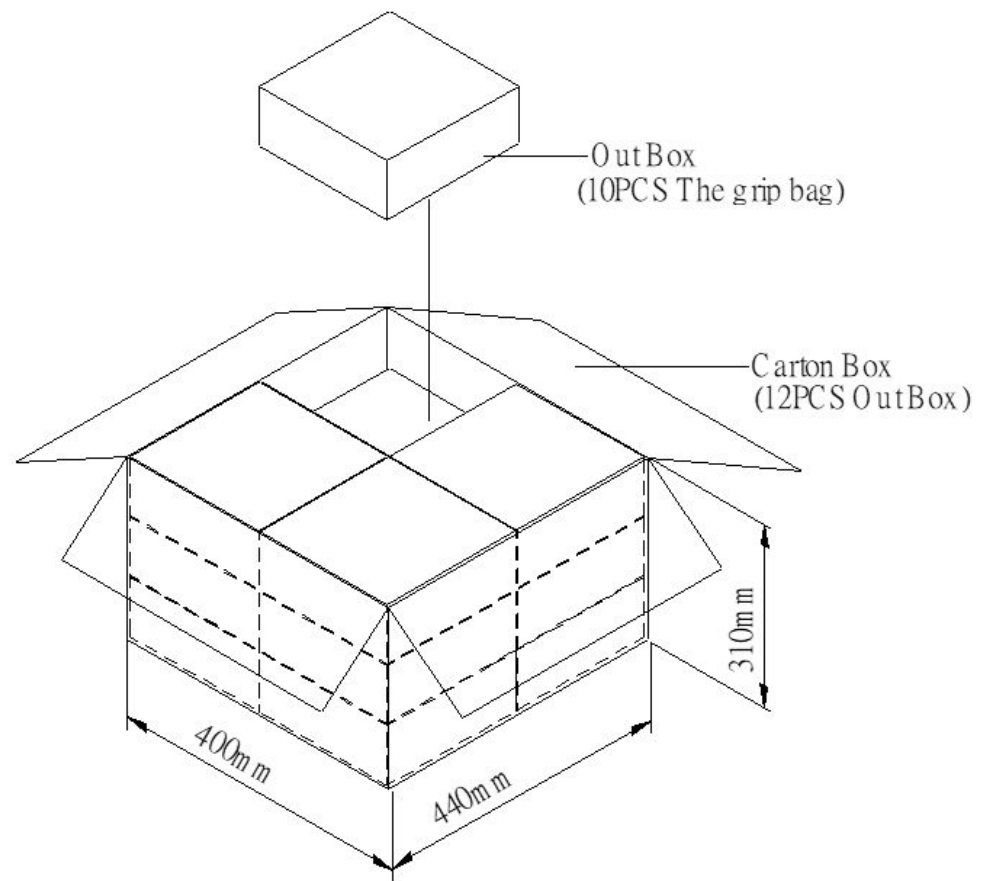
Page 4

Dimensions

Page 5

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Packing	L x W x H (mm)	Q'ty PCS
Clip Bag	170 x 120 x 0.1	200
Out Box	210 x 190 x 105	2000
Carton Box	440 x 400 x 310	24000