



soberton inc.

PT PIEZO AUDIO TRANSDUCER

Acoustic Product Specification

Product Number: PT-1403



Release | Revision: C/2018

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Specifications

Item	Unit	Specification	Condition
Rated Voltage	Vp-p	9.0	
Operating Voltage	Vp-p	1.0 ~ 30.0	
Mean Current	mA	5 Max.	At 9Vp-p, square wave, 5200Hz
Sound Output	dB	80	At 10cm, 9Vp-p, square wave, 5200Hz
Capacitance at 30Hz	PF	9400 ±25%	At 120Hz
Rated Frequency	Hz	5200 ±400	
Operating Temp	°C	-20 ~ +60	
Storage Temp	°C	-30 ~ +70	
Dimension	mm	Ø14.0×H2.85	See attached drawing
Weight	gram	0.8	
Material		ABS Black	
Terminal		Wire type	Length: 30mm (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 the solder bath at +250±5°C for 3±0.5 seconds.	90% min. lead terminals shall be wet with solder. No interference in operation
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
Vibration	The part shall be subjected to a vibration cycle of 10Hz to 55Hz to 10Hz in a period of 1 minute. Total peak amplitude shall be 1.52mm(9.3G). The vibration test shall consist of 2 hours per axis in each three axes(X,Y,Z). Total 6 hours.	After test the part shall 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 should be in ±10dBA compared with initial one.



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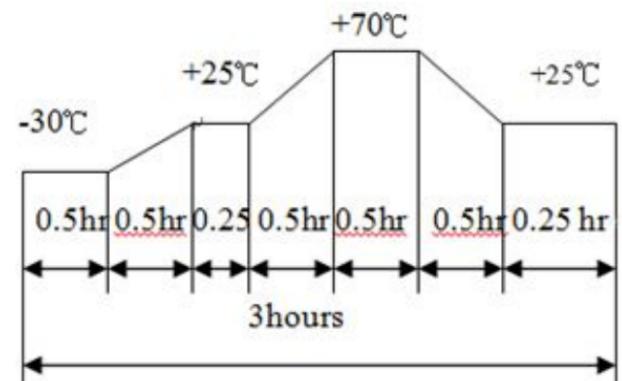
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Environment Test

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



Reliability Test

Item	Test condition	Evaluation standard
Operating Life Test	1. Continuous Life Test 72 hours of continuous operation at +60°C with the maximum rated voltage applied	After the test, the part shall meet specifications without any degradation in appearance and performance except SPL. After 4 hours at +25°C, the SPL should 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 the maximum rated voltage applied	

Standard test condition:

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



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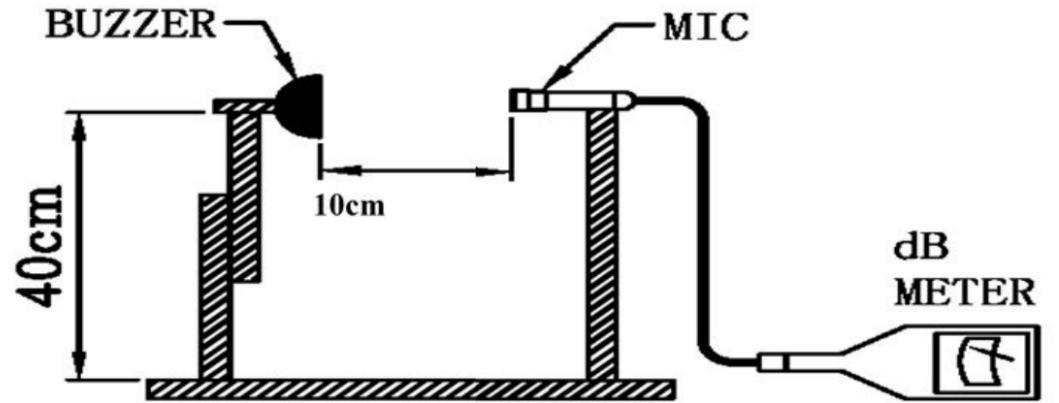
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Inspection Fixture

S.P.L Measuring Circuit

S.P.L Measuring Circuit

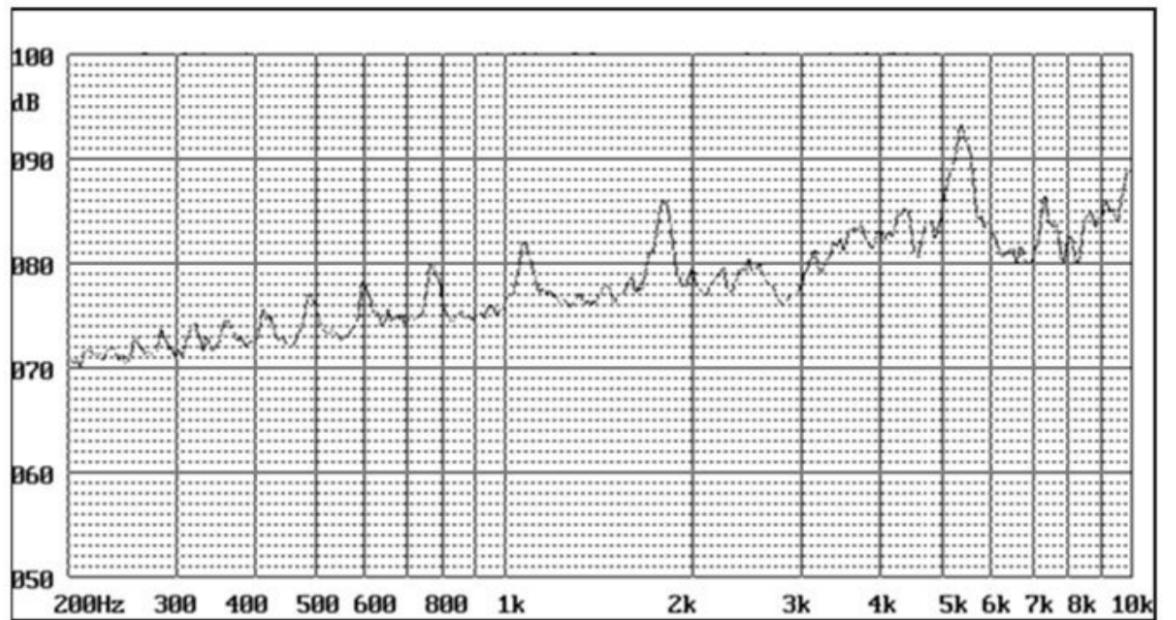
Input Signal: 9.0Vp-p, 5200Hz, Square Wave



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

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

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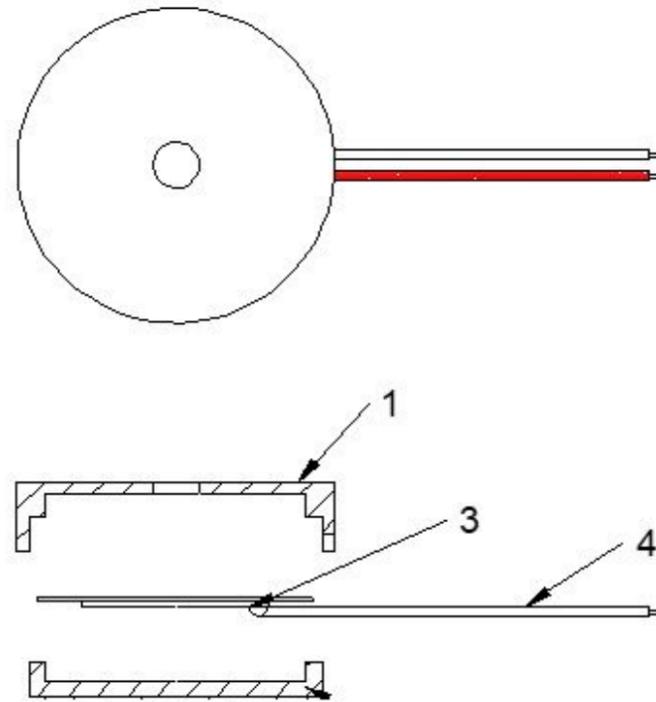
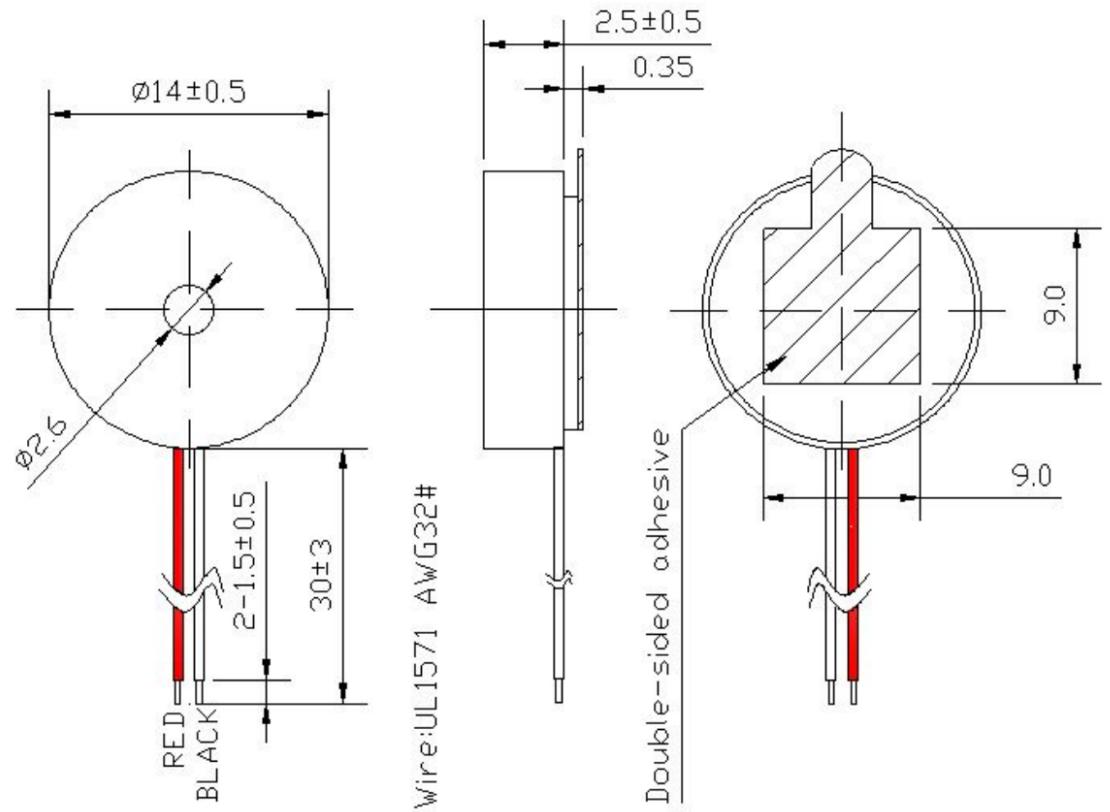
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Tolerance: ± 0.5 (unit: mm)



No.	Part Name	Material	Quantity
1	Case	ABS	1
2	Case	ABS	1
3	Piezo	Copper + Ceramics	1
4	Wire (30mm)	UL1571/ AWG32#	2
5	Double sided adhesive tape	AcR+off type paper	1



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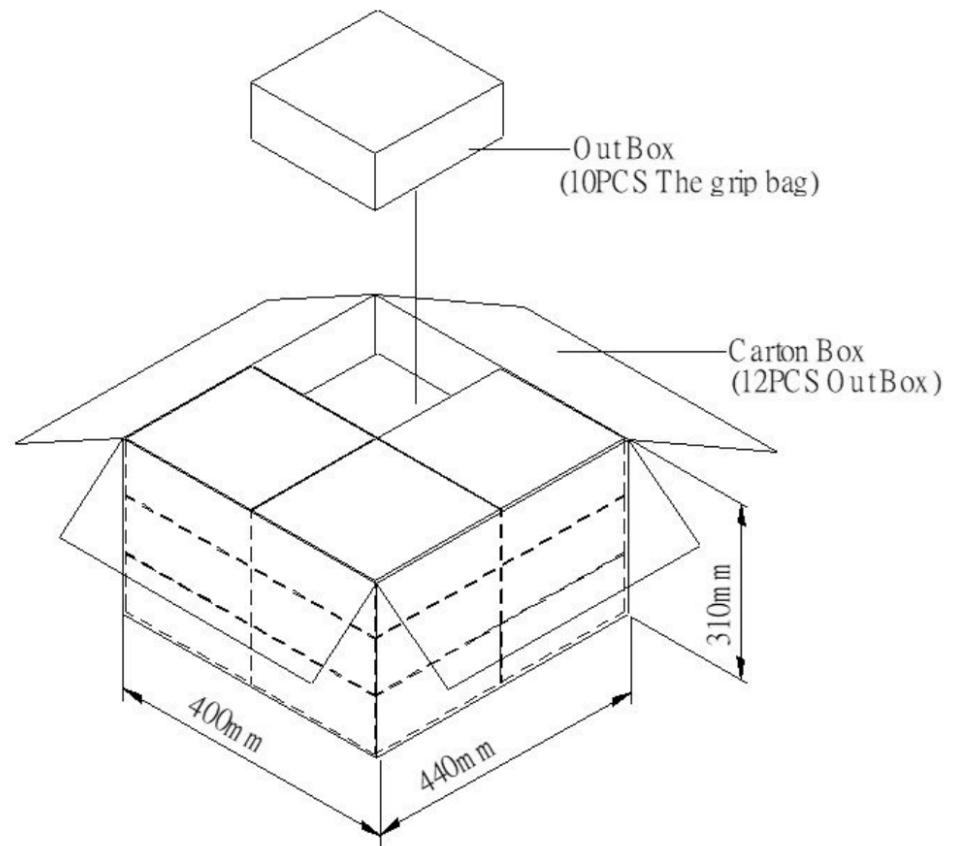
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Packing	L x W x H (mm)	Q'ty PCS
Grip Bag	170 x 120 x 0.1	200
Out Box	210 x 190 x 100	2,000
Carton Box	440 x 400 x 310	24,000