



soberton inc.

PT PIEZO AUDIO TRANSDUCER

Acoustic Product Specification

Product Number: PT-1303



Release | Revision: C/2021

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Specifications

Item	Unit	Specification	Condition
Rated Voltage	Vp-p	10.0	
Operating Voltage	Vp-p	1 ~ 30	
Mean Current	mA	5 Max	At rated voltage
Sound Output	dB	80	Min. Sound Output, 4800Hz, 10cm
Capacitance at 30Hz	pF	14000±30%	At 120Hz
Rated Frequency	Hz	4800±500	
Operating Temp	°C	-20 ~ +70	
Storage Temp	°C	-30 ~ +75	
Dimension	mm	ø13.0 × H3.5	See dimensions
Weight	gram	1.0	
Housing Material		ABS (Black)	
Terminal		WIRE Type	30mm UL1571 / AWG32#

Environmental Protection Regulation

RoHS 2.0

Test condition:

Temperature: +25±2 °C Related humidity: 65±5% 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 +260±5°C for 3±1 seconds	90% min. lead terminals shall be wet with solder. (Except the edge of terminal)
Soldering Heat Resistance	The part follows the reflow temperature curve to test its reflow thermal stability	No interference in operation.
Terminal Mechanical 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 measured after 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 axes in each three axis (X,Y,Z). A total of 6 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.
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.	



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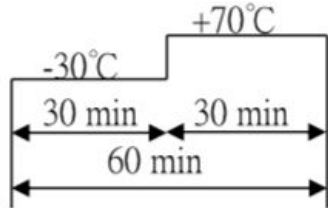
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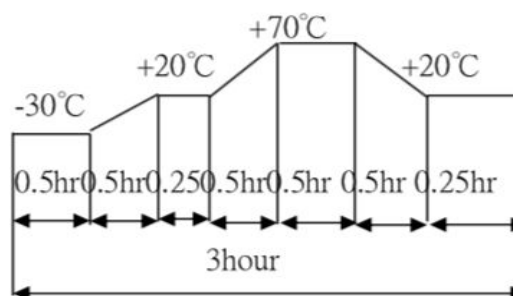
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Environment Test

Item	Test Condition	Evaluation standard
High Temp. Test	The part is placed in a chamber at +70°C for 96 hours.	Being placed for 4 hours at +25°C, the buzzer shall be measured.
Low Temp. Test	The part is placed in a chamber at -30°C for 96 hours.	The value of oscillation, frequency / current consumption should be in ±10% compared with initial ones.
Thermal Shock Test	The part shall be subjected to 10 cycles. One cycle shall consist of: 	The SPL should be in ±10dB compared with initial one.

Temp. / Humidity Cycle Test
The part shall be subjected to 5 cycles. One cycle shall consist of:



Reliability Test

Item	Test Condition	Evaluation Standard
Operating Life Test	<p>1. Continuous Life Test 48 hours of continuous operation at +55°C with maximum rated voltage applied</p> <p>2. Intermittent Life Test A duty cycle of 1 minute on, 1 minutes off, a minimum of 1000 times at +25±2°C and the maximum rated voltage applied</p>	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.

Standard Test Condition:

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



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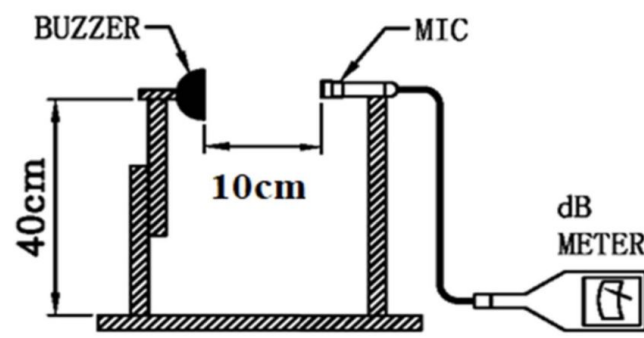
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Measuring Method (Speaker Mode)

S.P.L Measuring Circuit

Input Signal : 10.0Vp-p, Square Wave, 4800Hz

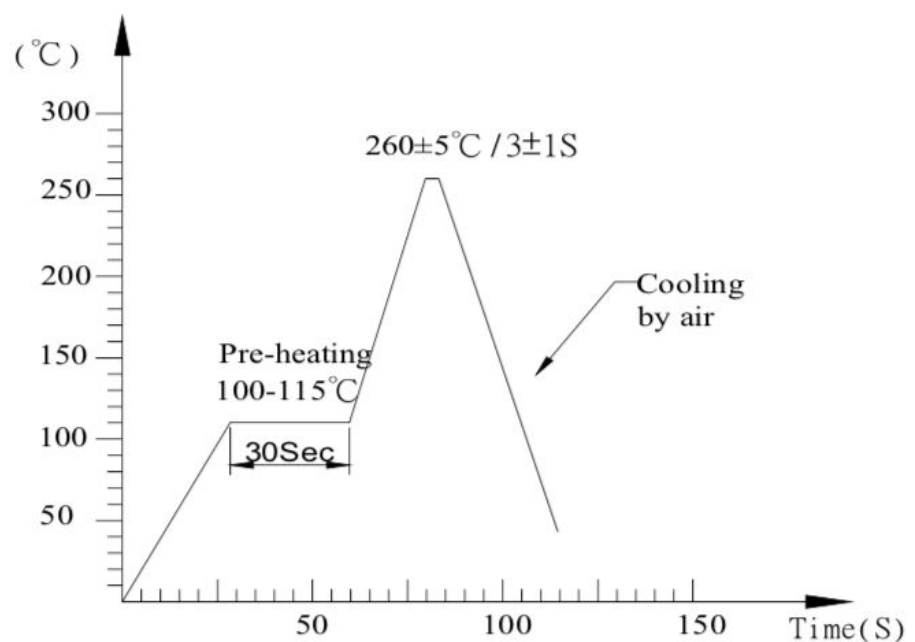


MIC: S.P.L meter TES 1351B or equivalent

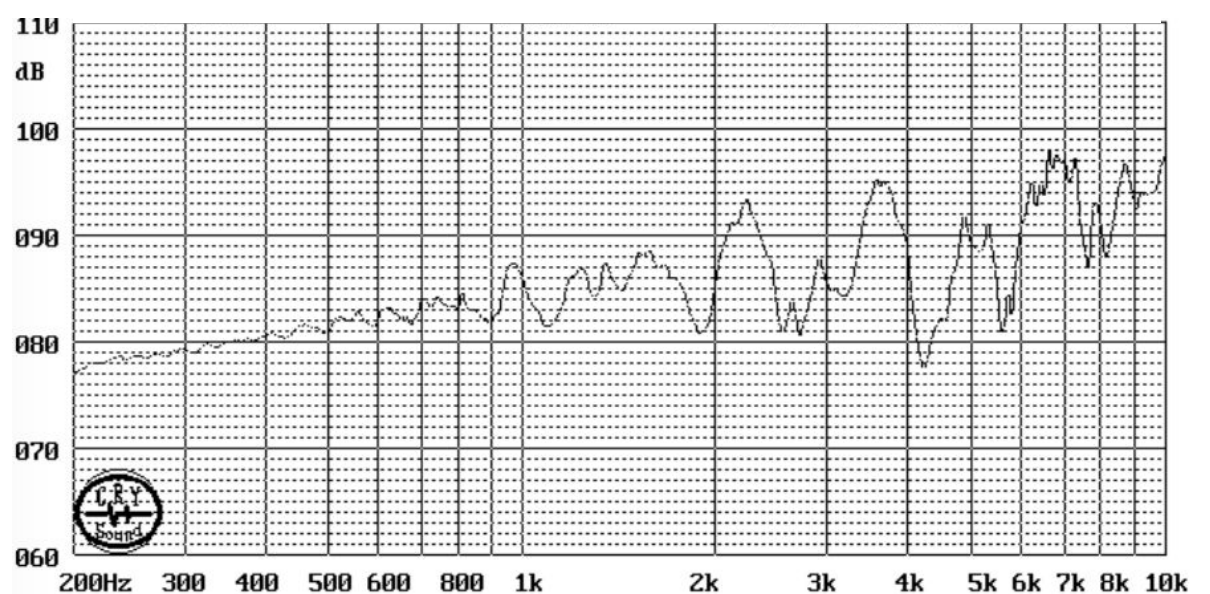
S.G: EE 1641B Function Generator or equivalent

Wave Soldering Condition

Recommended Wave soldering Temperature Curve



Frequency Response Curve





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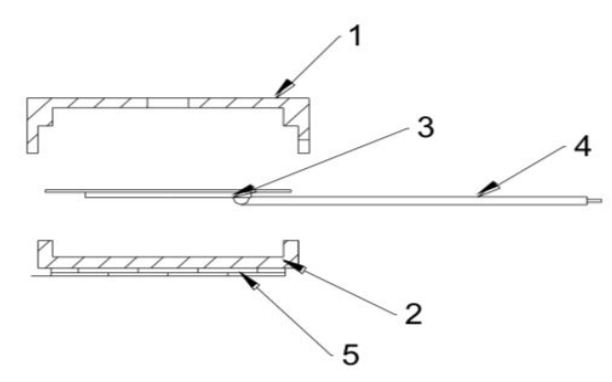
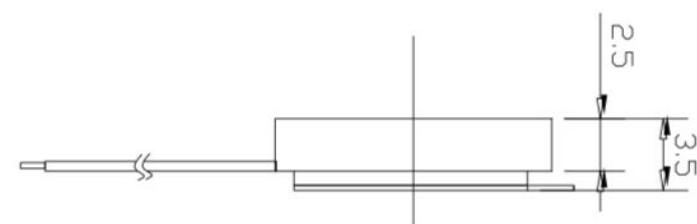
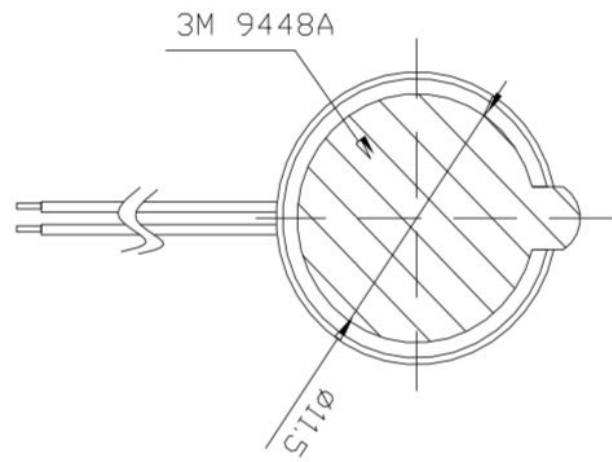
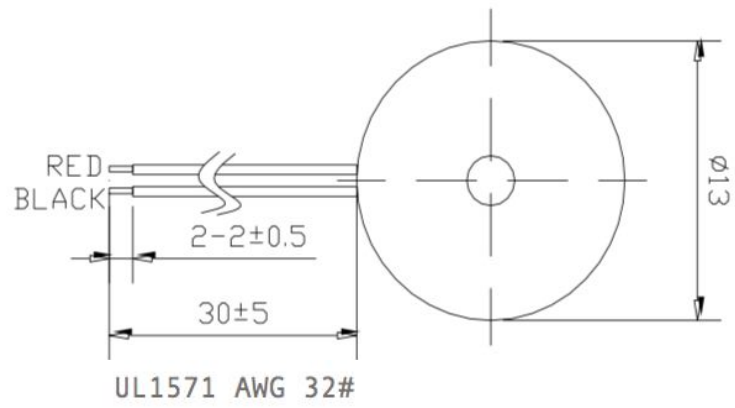
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Tolerance: ± 0.5 (unit: mm)



No.	Part Name	Material	Quantity
1	Case	ABS	1
2	Case	ABS	1
3	Piezo	Copper + Ceramics	1
4	Wire (30mm)	PVC + Copper UL 1571 / AWG 32#	2
5	Double-sided Adhesive Tape	AcR+Off Type Paper	1



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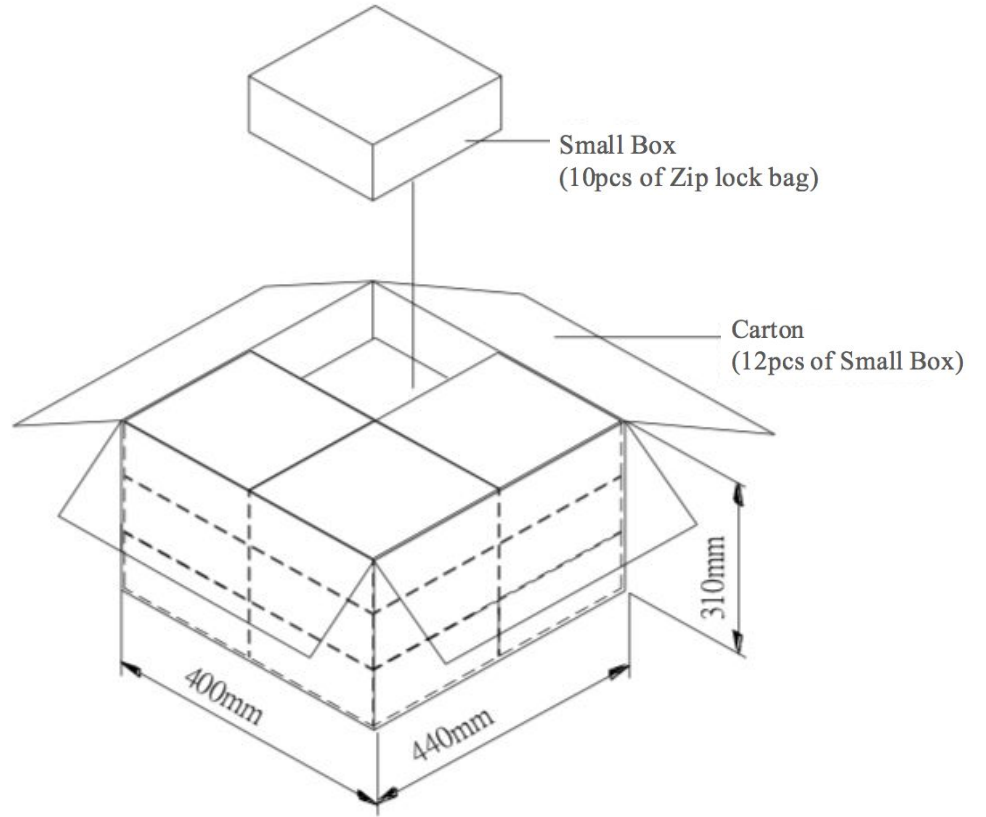
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Packing	L x W x H (mm)	Quantity
Zip lock Bag	170 x 120 x 0.1	200 pcs
Small Box	210 x 190 x 100	2,000 pcs
Carton Box	440 x 400 x 310	24,000 pcs