

**PRODUCT:** Electromagnetic Buzzer

**EDITION:** A/2017

Soberton Inc.

#### THIS SPECIFICATION APPLIES TO THE ELECTROMAGNETIC BUZZER

#### **SPECIFICATION**

Test condition: TEMP=+25±2 ℃ Related humidity=65±5% Air pressure:860-1060mbar

item	unit	specification	condition
rated voltage	Vo-p	1.5	Vo-p 🚹
operating volt	Vo-p	4.0 ~ 6.0	_↓ L OV
mean current	mA	Max.80	At rated voltage 3200Hz, square wave, 1/2 duty
coil resistance	Ω	30	
sound output	dBA	85	At 10cm(A-weight free air), at rated voltage
			3200Hz, square wave, 1/2duty
rated frequency	Hz	3200	
operating temp	°C	-20 ~ +60	
storage temp	°C	-30 ~ +70	
dimension	mm	φ9.0×H4.3	See attached drawing
weight	gram	0.6	
material		PPO (Black)	
terminal		Pin type (Plating Au)	See attached drawing
environmental		RoHS	
protection regulation			

#### **ENVIRONMENT TEST**

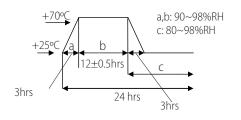
item	test condition
high temp. test	After being placed in a chamber at +70°C for 96 hours.
low temp. test	After being placed in a chamber at -30°C for 96 hours.
thermal shock	The part will be subjected to 10 cycles.  One cycle shall consist of:  +70°C  -30°C  30 min  60 min
 /l	The area will be a subject at a 10 and a

evaluation standard

After the test the part will meet specifications without any degradation in appearance and performance except SPL, after 4 hours at  $+25^{\circ}$ C. The SPL shall be in  $\pm 80 \text{dBA}$  compared with initial one.

temp./humidity cycle

The part will be subjected to 10 cycles. One cycle shall be 24 hours and consist of:





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#### **RELIABILITY TEST**

item	test conditions	evaluation standard
operating life test	ORDINARY TEMPERATURE	After the test the part will meet specifications
	Ordinary temperature	without any degradation in appearance and
	The part will be subjected to 1000 hours of	performance except SPL, after 4 hours at +25°C.
	continuous operation at +25 ±10°C	The SPL would be in ±80dBA compared with
	HIGH TEMPERATURE	initial one.
	The part will be subjected to 500 hours of	
	continuous operation at +60°C with 1.5V,	
	3200Hz applied	
	LOW TEMPERATURE	-
	The part will be subjected to 500 hours of	
	continuous operation at -20°C with 1.5V, 3200Hz	
	applied.	

#### **TEST CONDITION**

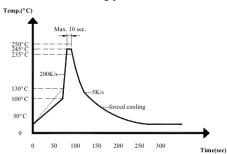
Standard Test Condition: a)Temperature: +5~+35°C b)Humidity:45~85% c)Pressure: 860~1060mbar

#### **MECHANICAL CHARACTERISTICS**

item	test conditions	evaluation standard
solderability	Lead terminal are immersed in rosin for 5 seconds and then immersed in solder bath of +250±5°C for 3±0.5 seconds.	90% min. lead terminals will be wet with solder
soldering heat resistance	Lead terminals are immersed in soldering bath of +250±5°C for 2±0.5 seconds.	No interference in operation.
terminal mechanical strength	Apply the terminal with 1KG strength for 10±1 seconds.	No damage and cutting off.
vibration	The part will be subjected to a vibration cycle of 10Hz to 55Hz to 10Hz in a period of 1 minute.  Total peak amplitude will be 1.52mm(9.3G). The vibration test will consist of 2 hours per axis in each three axes(X,Y,Z). Total 6 hours.	After the test the part will meet specifications without any damage in appearance and performance except SPL.  The SPL would be 80dBA or more.
drop test	The part only will be dropped from a height of 75cm onto a 40mm thick wooden board 3 times in 3 axes(X,Y,Z). Total of 9 times.	

#### RECOMMENDED WAVE SOLDERING TEMPERATURE CURVE

#### \* Wave Soldering profile of lead-free



Recommendable wave soldering condition is as follows:

Note 1: It is requested that wave soldering should be executed after heat of product goes down to normal temperature.

Note 2: Peak wave temperature of 235°C  $\sim$  250°C maximum of 10 seconds.

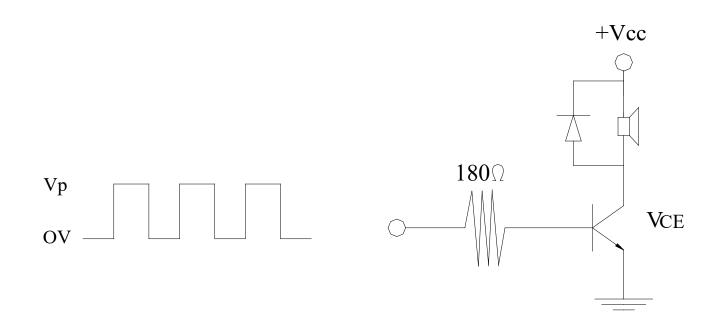


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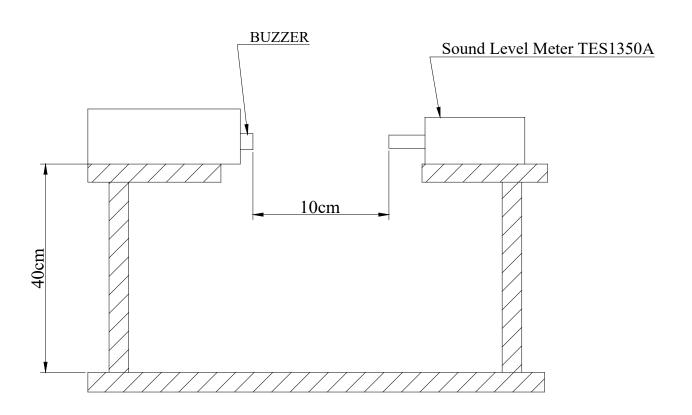
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# **MEASUREMENT TEST CIRCUIT**



# **INSPECTION FIXTURE**





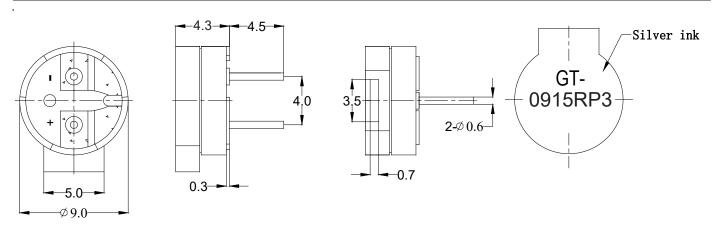
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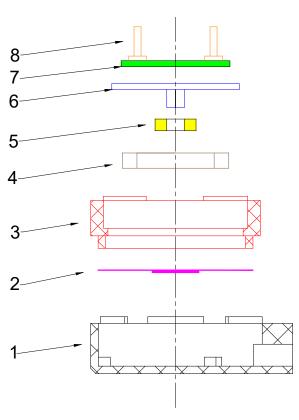
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# **DIMENSIONS**

Tolerance:±0.5 (unit: mm)





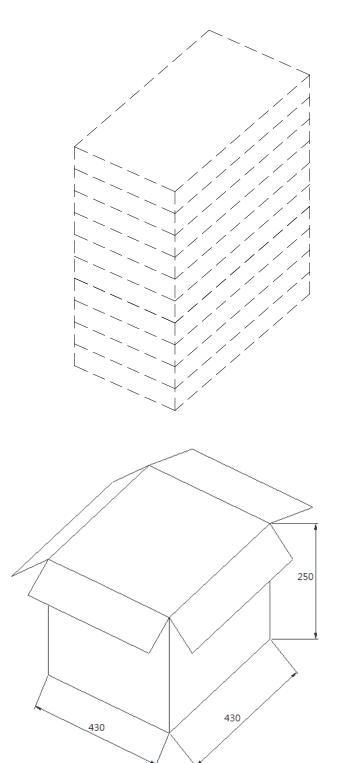
no	item	material	quantity
1	CASE	PPO	1
2	Diaphragm	Ferrum	1
3	CASE	PPO	1
4	Magnet ring	NdFeB	1
5	Coil	Copper	1
6	Core	Ferrum	1
7	PCB	Epoxy glass fiber cloth + copper	1
8	PIN	Copper	2



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# **PACKING**



packing box	LxWxH (mm)	pieces
Tray	190x190x25	100
Inner cartons	210x210x220	1600
Outer cartons	430x430x250	6000