



MODEL: PT-1407
PRODUCT: Piezo Buzzer
EDITION: A/2017

Soberton Inc.

THIS SPECIFICATION APPLIES TO THE PIEZO BUZZER

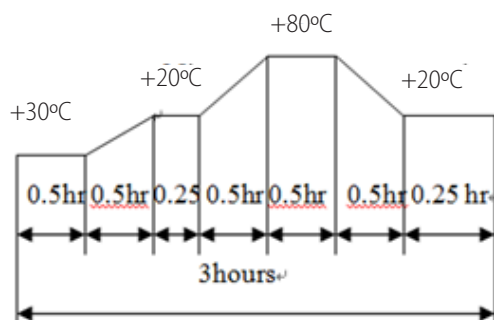
SPECIFICATION

Test condition: TEMP=+25±2 °C Related humidity=65±5% Air pressure: 860 ~ 1060mbar

item	unit	specification	condition
rated voltage	VDC	5.0	
operating volt	VDC	1 ~ 20 Max	
current consumption	mA	1 Max	At 5V p-p, square wave, 4.0 KHz
sound output	dBA	80	At 10 cm / 5V p-p, square wave, 4.0KHz
resonant frequency	Hz	4000	
capacitance at 30 Hz	pF	15000 ± 30	at 120Hz
operating temp	°C	-20 ~ +70	
storage temp	°C	-30 ~ +80	
dimension	mm	φ13.6x6.8	See attached drawing
weight	gram	1.0	
material		LCP (Black)	
terminal		Pin type (Red copper)	See attached drawing
environmental protection regulation		RoHS	

ENVIRONMENT TEST

item	test condition	evaluation standard
high temp. test	After being placed in a chamber at +80°C for 96 hours.	Being placed for 4 hours at +25°C, buzzer will be measured.
low temp. test	After being placed in a chamber at -30°C for 96 hours.	The value of oscillation, frequency / current consumption would be in ±10% compared with initial one.
Humidity test	After being placed in a chamber at +70°C, and 90±5% relative humidity for 96hours	The SPL would be in ±10dB compared with initial one.
Temp. cycle test	The part will be subjected to 5 cycles. One cycle shall be consist of:	





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RELIABILITY TEST

item	test conditions	evaluation standard
operating life test	CONTINUOUS LIFE TEST 48hours of continuous operation at +55°C with maximum rated voltage applied.	After the 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 ± 10 dBa compared with initial one.
	INTERMITTENT LIFE TEST A duty cycle of 1 minute on, 1 minutes off, a minimum of 1000 times at $+25\pm 2^\circ\text{C}$ and maximum rated voltage applied	

TEST CONDITION

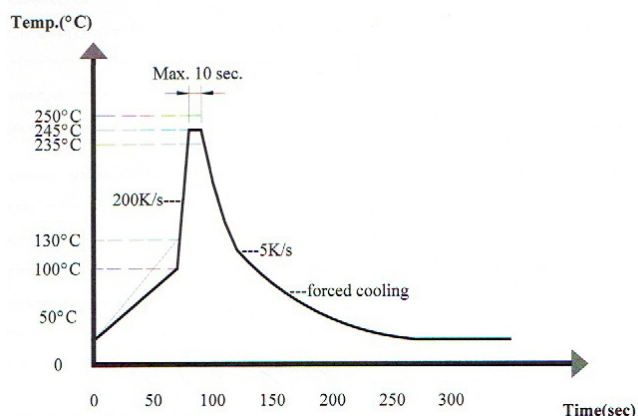
Standard Test Condition: a)Temperature: $+5\sim +35^\circ\text{C}$ b)Humidity:45~85% c)Pressure: 860~1060mbar

MECHANICAL CHARACTERISTICS

item	test conditions	evaluation standard
solderability	Lead terminal are immersed in rosin for 5 seconds and then immersed in solder bath of $+250\pm 5^\circ\text{C}$ for 3 ± 1 seconds.	90% min. lead terminals will be wet with solder
soldering heat resistance	The product is followed the reflow temperature curve to test it's reflow thermostability.	No interference in operation.
terminal mechanical strength	The force 10 seconds of 9.8N is applied to each terminal in axial direction.	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	The value of oscillation frequency current consumption should be in $\pm 10\%$ compared with initial one.
drop test	The part only will be dropped from a height of 100cm onto a 10mm thick wooden board 3 times in 3 axes(X,Y,Z). A total of 9 times.	The SPL would be in ± 10 dB compared with initial one

RECOMMENDED TEMPERATURE PROFILE

* 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 maximum of 10 seconds.



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MEASURING METHOD

S.P.L Measuring Circuit

Input Signal: 5.0V p-p, Square wave, 4.0KHz

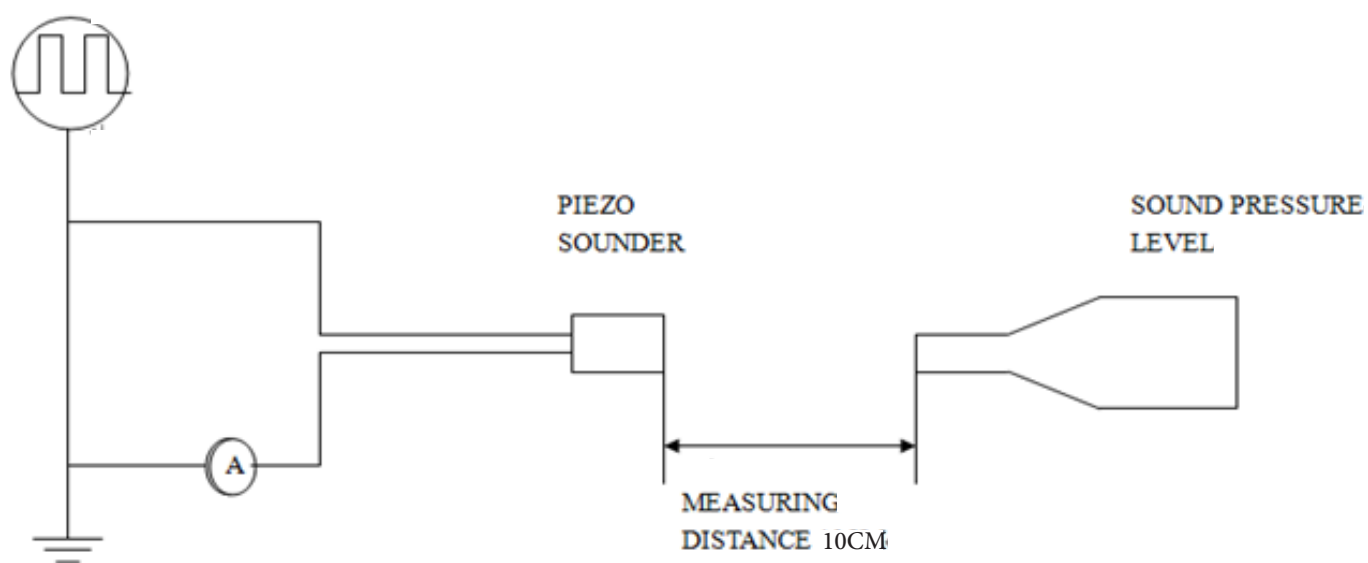
Mic: S.P.L meter TES1351B or equivalent

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

Mic: TION UC30

S.G: Hewlett Packard 33120A

Function Generator or equivalent



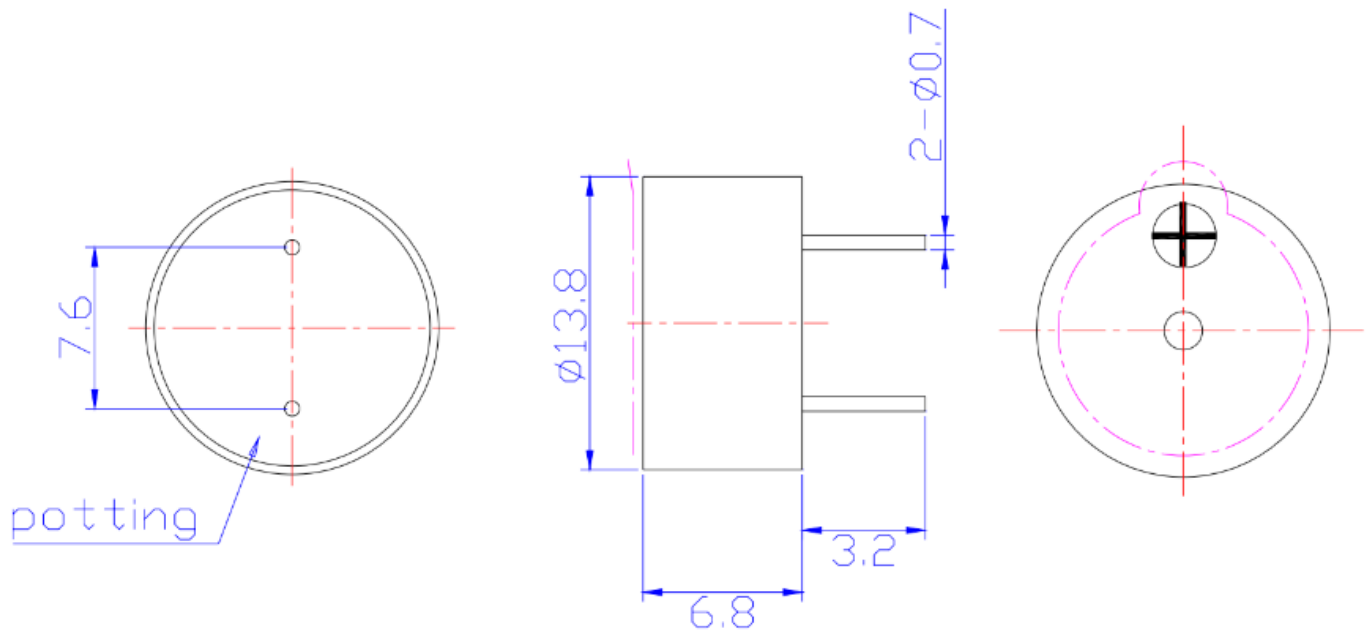


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DIMENSION

Tolerance: ± 0.5 (unit: mm)



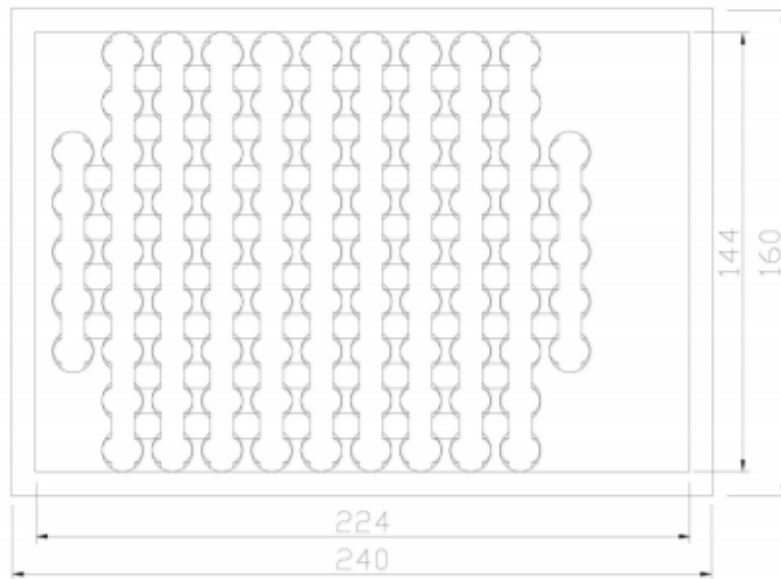
no	item	material	quantity
1	Case	LCP	1
2	Cover	LCP	1
3	Piezo	Nickel + Ceramic	1
4	Wire	Copper	2



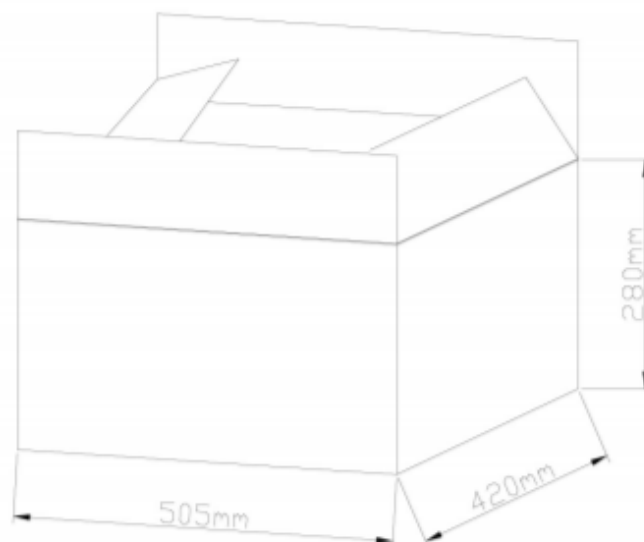
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PACKING



100



5000