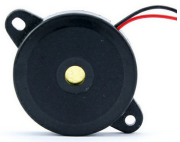


MODEL: PT-2404
PRODUCT: Piezo Buzzer
EDITION: A/2017

Soberton Inc.

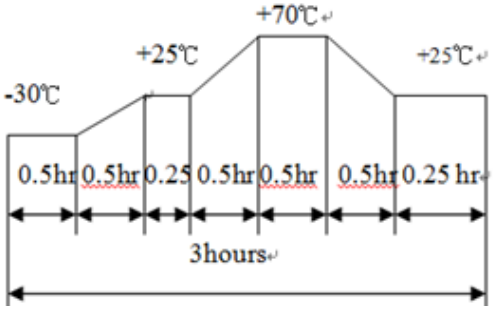
THIS SPECIFICATION APPLIES TO THE PIEZO BUZZER

SPECIFICATION

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

item	unit	specification	condition
rated voltage	VDC	15.0	
operating volt	VDC	1 ~ 25 Max	
current consumption	mA	8 Max	At 15v pp 1/2 duty, square wave, 4.8KHz
sound output	dBA	90	At 10 cm / 15V p-p, 1/2 duty, square wave, 4.8KHz
resonant frequency	Hz	4800	
capacitance at 30 Hz	pF	20000 ± 30	at 1KHz
operating temp	ºC	-20 ~ +70	
storage temp	ºC	-30 ~ +80	
dimension	mm	ø24.0 x H4.0 (50mm)	See attached drawing
weight	gram	3.0	
material		ABS (Black)	
terminal		Wire type	See attached drawing
environmental protection regulation		RoHS	

ENVIRONMENT TEST

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

RELIABILITY TEST

item	test conditions	evaluation standard
operating life test	CONTINUOUS LIFE TEST 48hours of continuous operation at +55ºC 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 +25ºC. The SPL would be in ±10dBA compared with initial one.
	INTERMITTENT LIFE TEST A duty cycle of 1 minute on, 1 minutes off, a minimum of 1000 times at +25±2ºC and maximum rated voltage applied	

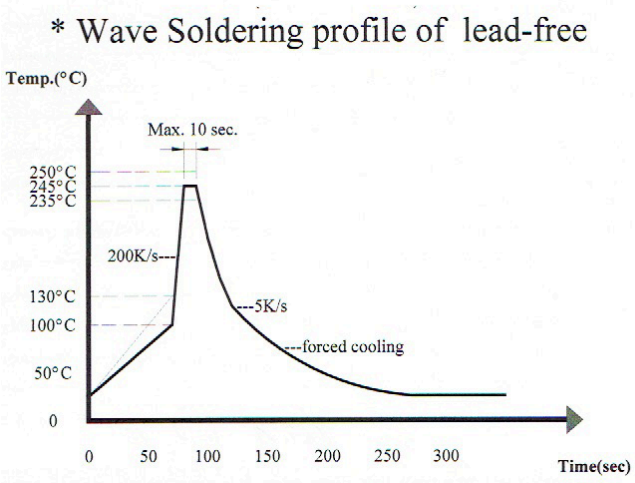
TEST CONDITION

Standard Test Condition: a)Temperature: +5~+35ºC 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±5ºC 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 1 hour.	The value of oscillation frequency current consumption should be in ±10% compared with initial one.
drop test	The part only will be dropped from a height of 1.2m onto a 50mm thick wooden board 3 times in 3 axes(X,Y,Z). A total of 9 times.	The SPL would be in±10dB compared with initial one

RECOMMENDED TEMPERATURE PROFILE

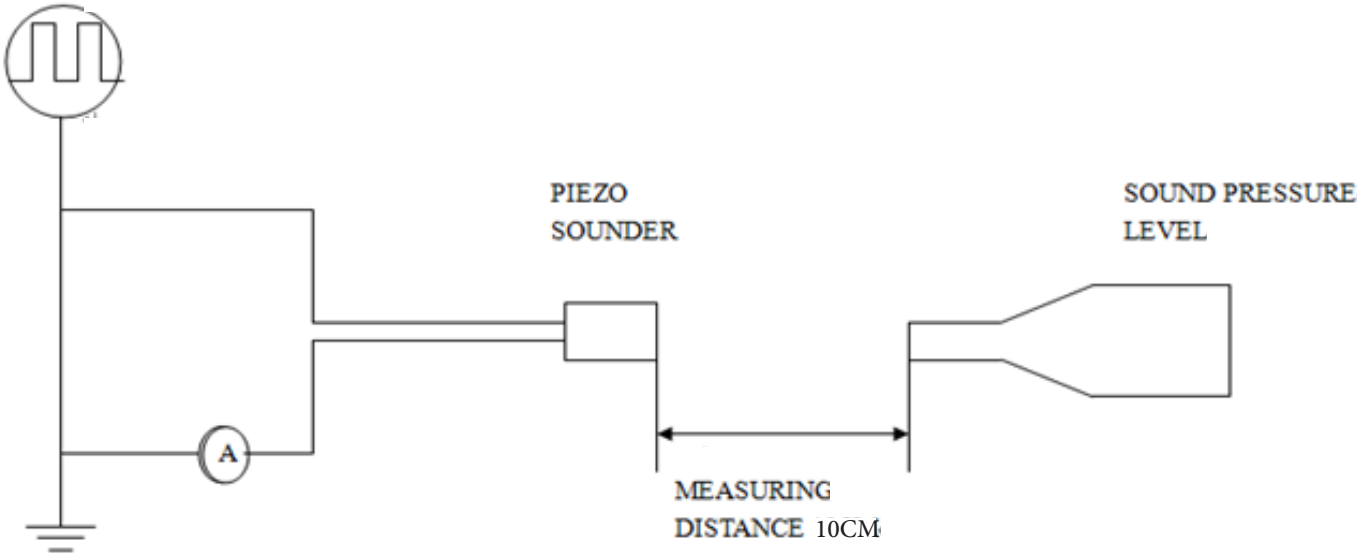


Recommendable wave soldering condition is as follows:
Note 1: It is requested that wave soldering should be executed after heat of product goes down to normal temperature.
Note 2: Peak wave temperature of 235˚C maximum of 10 seconds.

MEASURING METHOD

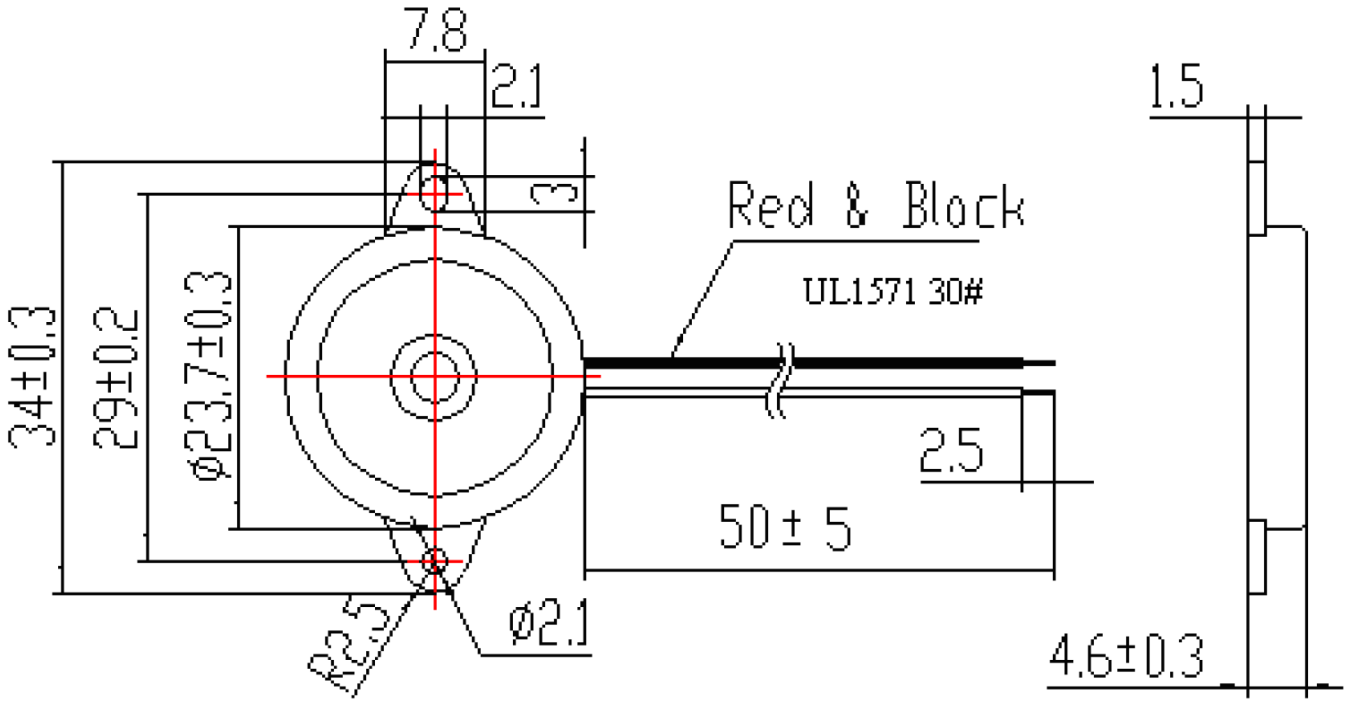
S.P.L Measuring Circuit
Input Signal: 15V p-p, 1/2 duty, square wave, 4.8 KHz

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

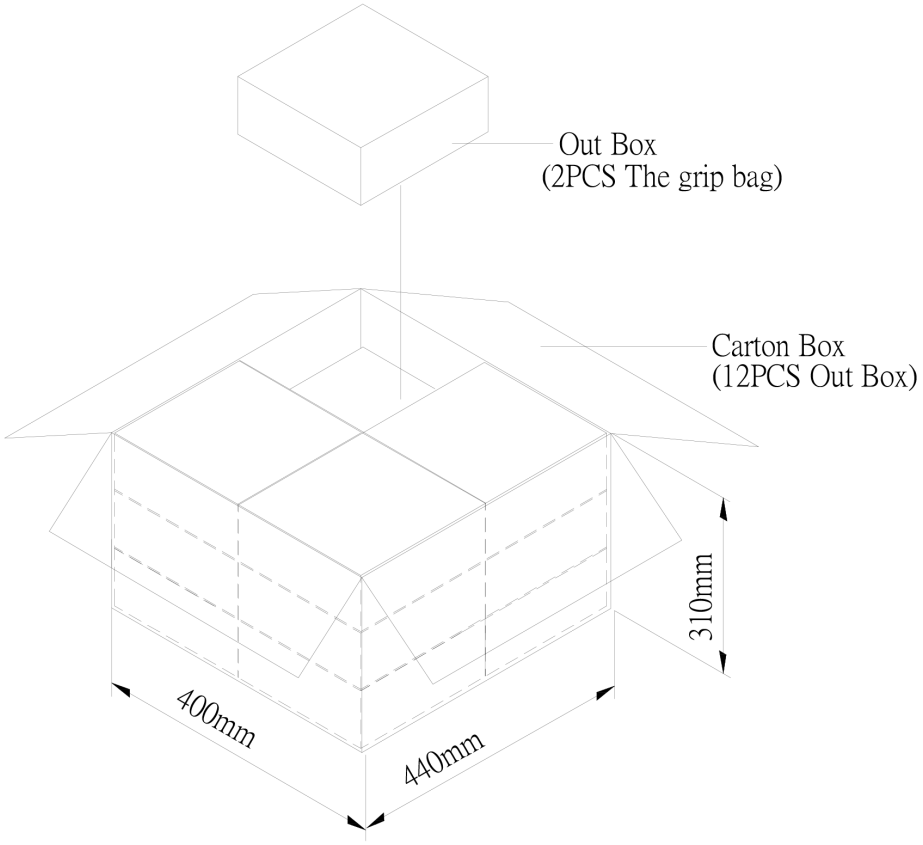


DIMENSION

Tolerance:±0.5 (unit: mm, except specified)



PACKING



Item	Length×Width×Height(mm)	Q'ty (PC)
Plastic		50
Box	200×190×100	100
Carton	440×400×310	1200