BPE 1203S-05 A

PIEZO BUZZER

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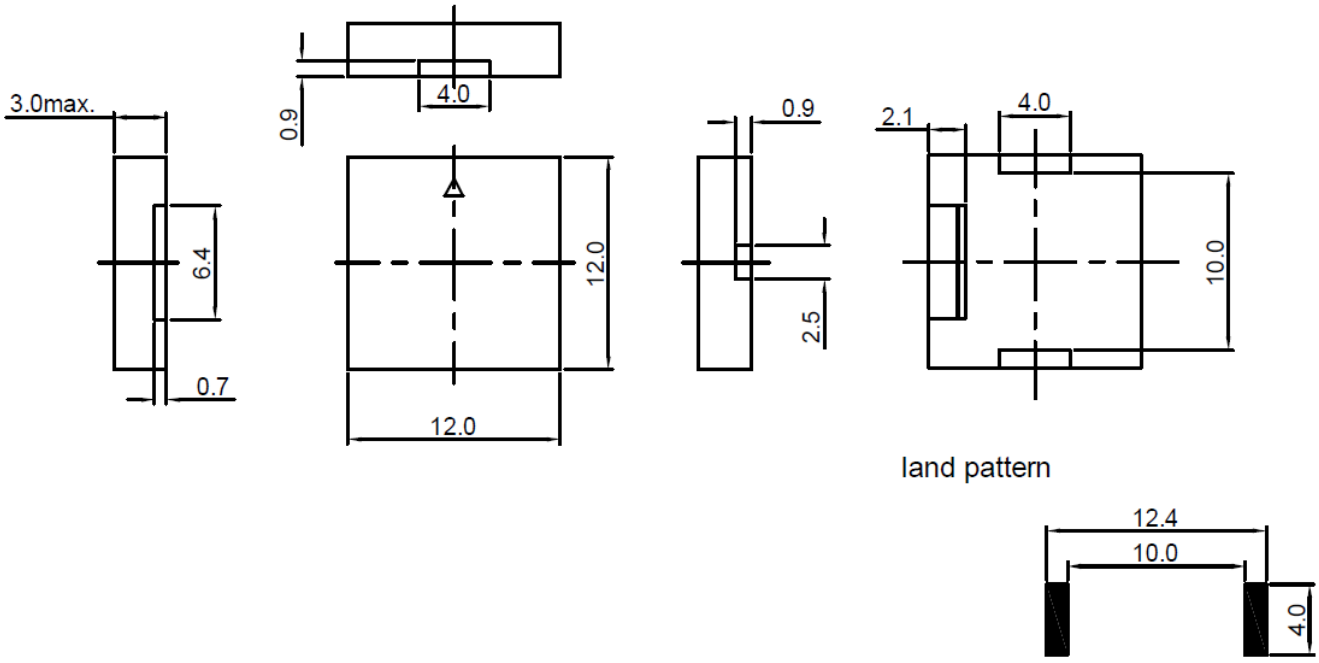
CONTENT

1. SPECIFICATIONS

Parameter	Unit	Conditions / Description	MIN	TYP	MAX
Rated Voltage	Vp-p	Square wave		3	
Operating Voltage	Vp-p		1		25
Rated Current	mA	At rated voltage (3Vp-p square wave, 1/2duty)			1
Capacitance	nF	At 120Hz	11.2	16	20.8
SPL	dB	At rated voltage (3Vp-p square wave, 1/2duty), at 4.000Hz, in 10cm distance	75		
Resonance Frequency	Hz			4.000	
Plating layer of plate				TIN	
Contact				SMD	
Packaging				REEL	
Operating Temperature	°C		-40		+85
Storage Temperature	°C		-40		+85
Weight	g		0.26	0.35	0.44

2. DRAWING



Tolerance: ± 0.3 Unit: mm

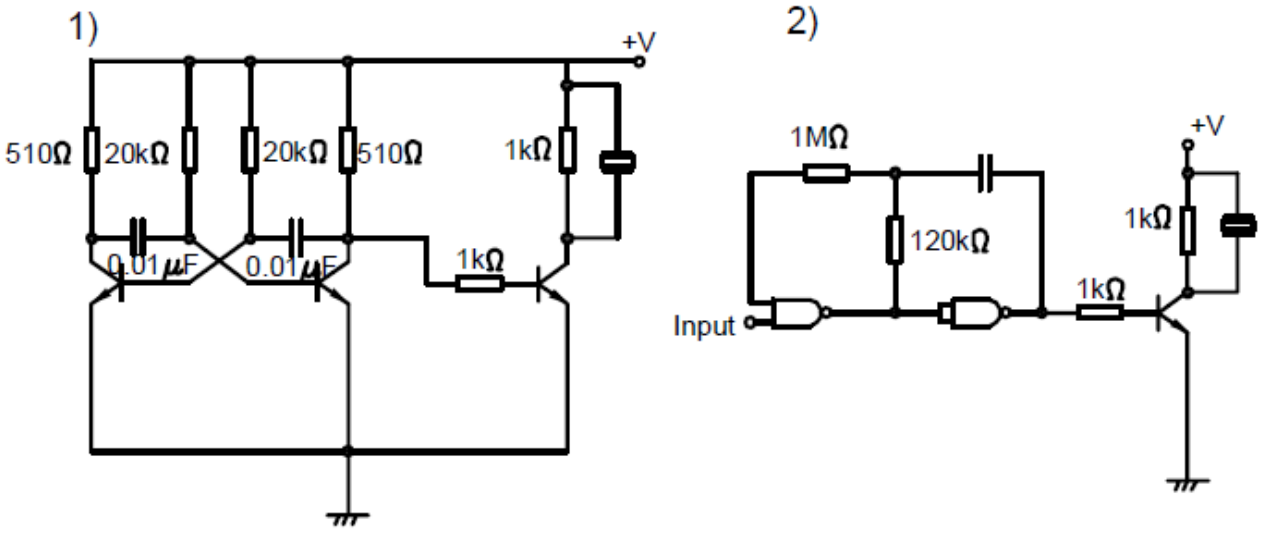
3. TEST METHOD

3.1 RECOMMENDED CIRCUIT

The following are examples of externally driven circuits.

1) Unstable multi-vibrator using Tr.

2) Circuits using inverters or NAND gates.



DESIGNED BY	Sergio Wolff	DATE	2017.08.11	PART NO.	INDEX
RELEASED BY	Christopher Pagel	DATE	2017.08.11	BPE 1203S-05 A	A
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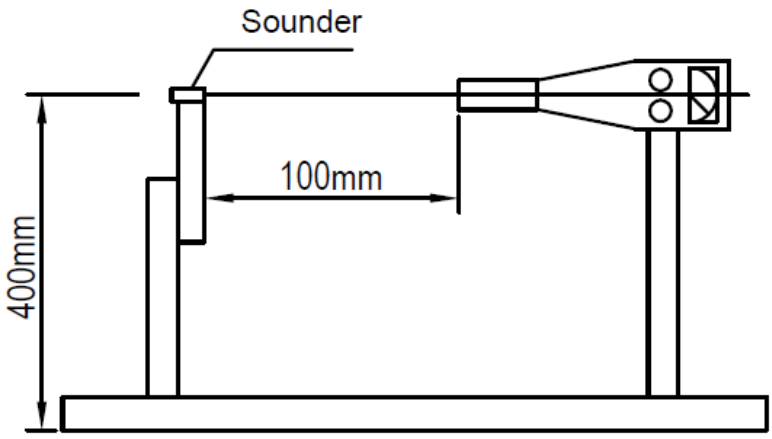
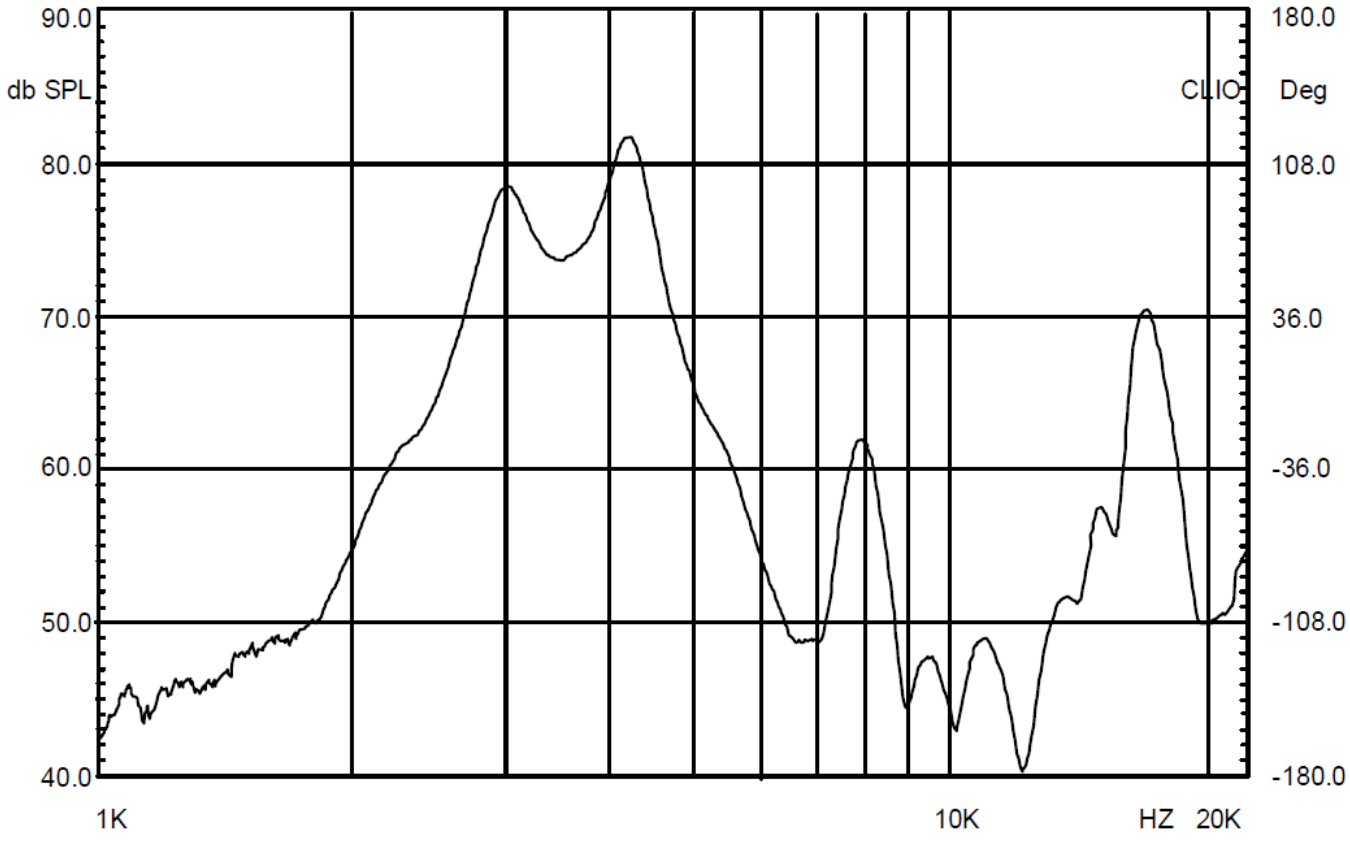
DRAWING NO.	410614212				

3.2 STANDARD TEST FIXTURE

No reaction in space with in 400mm in all direction



3.3 FREQUENCY RESPONSE CURVE (Square Wave 3Vp-p, 10cm)



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4. RELIABILITY TEST

4.1 High Temperature Test

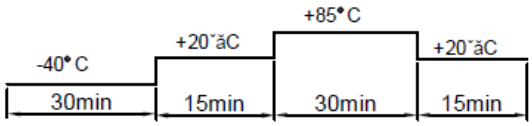
Temperature	+85°C
Duration	96 hours

4.2 Low Temperature Test

Temperature	-40°C
Duration	96 hours

4.3 Temperature Cycle Test

Cycles	5



4.4 Humidity Test

Temperature	+40°C
Relative Humidity	93% RH
Duration	96 hours

All these tests above should be measured after leaving normal temperature for 2 hours.

4.5 Vibration Test

Vibration Frequency	10~55Hz
Amplitude	1.52mm
Duration	2 hours each of 3 axis

4.6 Drop Test

Height	70 cm (to 10mm thick wooden board)
Direction	3

4.7 Solderability

Temperature	255 ± 5°C
Duration	3 ±0.5 seconds

4.8 Solder Heat Resistance

Temperature	255 ± 10°C
Duration	30 seconds

Notice:
All specification must be satisfied in this condition. SPL: allowable deviation ±5dB of the initial value after testing

5. REFLOW CONDITION

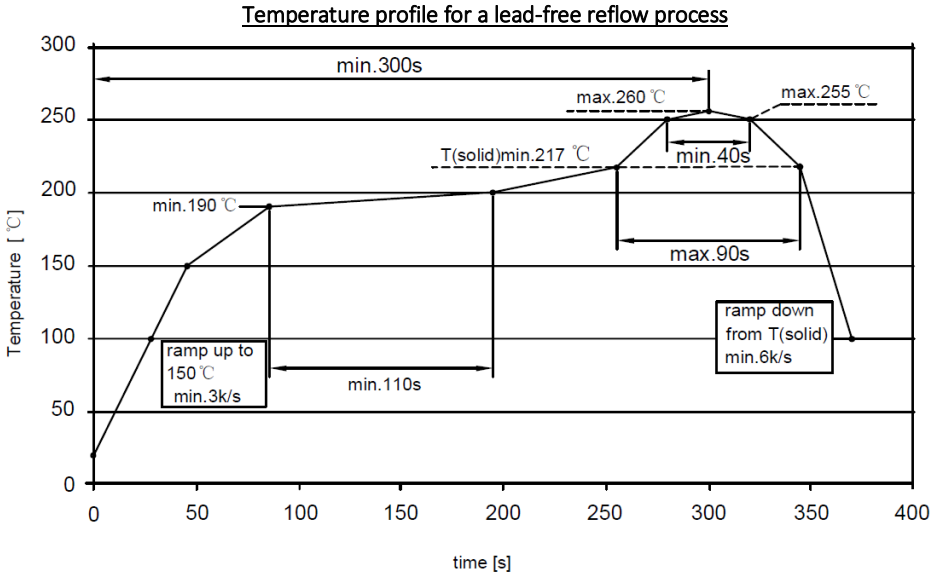


Fig. 1 Recommended soldering Temperature-Time profile (Reflow soldering)

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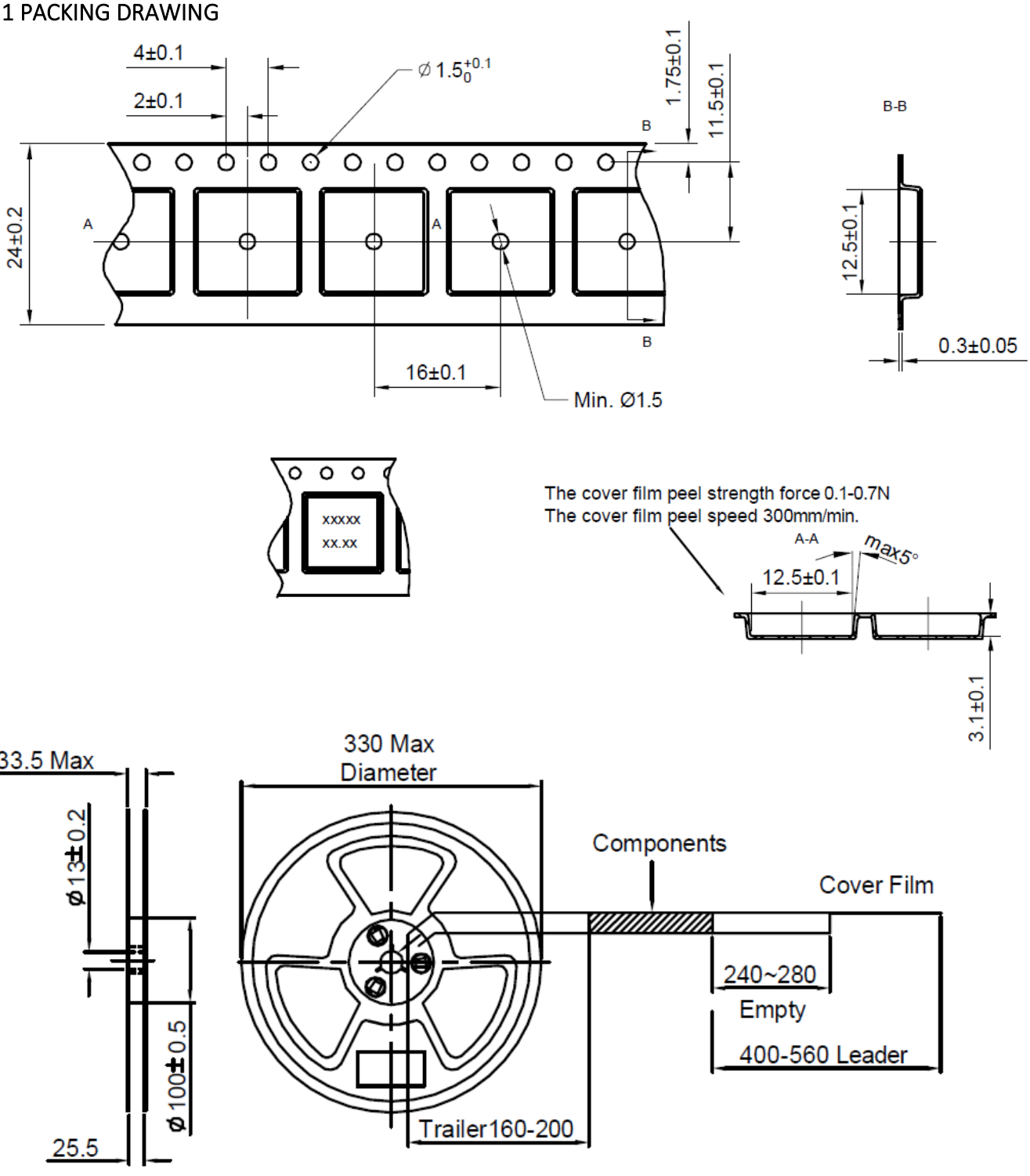
6. PACKING

6.1 PACKING DRAWING



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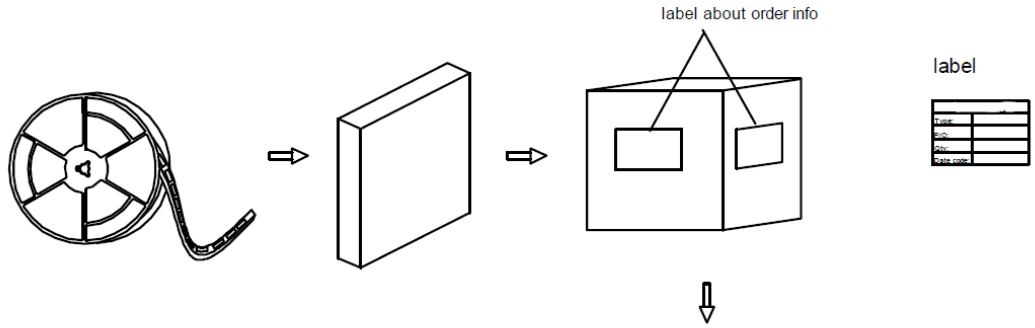
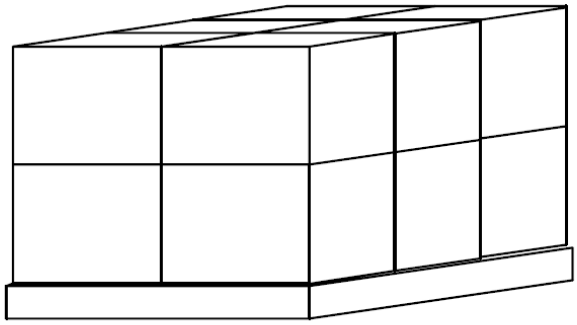


6.2 PACKING QUANTITY

1000pcs per reel
5 reels per carton
5000pcs per carton in total
Carton size: 38x28x37cm
12 cartons per tray
Tray size: 85x77x74cm



7. NOTICE

7.1 The products mustn't be washed

7.2 Storage Condition

The products should be stored in a room, where the temperature/humidity is stable. And avoid such places where there are large temperature changes. Please store the products at the following conditions:
Temperature: -10 to + 40°C Humidity: 15 to 85% R.H.

7.3 Expire Date on Storage

Expire date (Shelf life) of the products is six months after delivery under the conditions of a sealed and an unopened package. Please use the products within six months after delivery. If you store the products for a long time (more than six months), Use them carefully, because the products may be degraded in the solderability and/or rusty. Please confirm solderability and characteristics for the products regularly.

7.4 Notice on Product Storage

(1) Please do not store the products in a chemical atmosphere (Acids, Alkali, Bases, Organic gas, Sulfides and so on), because the characteristics may be reduced in quality, and/or be degraded in the solderability due to the storage in a chemical atmosphere.
(2) Please use the products immediately after the package is opened, because the characteristics may be reduced in quality, and/or be degraded in the solderability due to storage under the poor condition.
(3) Please do not drop the products to avoid cracking of ceramic element.

8. HISTORY CHANGE RECORD

REV	CHANGE ITEMS		DATE
	BEFORE CHANGE	AFTER CHANGE	
1	Old Layout	New Layout	2020.08.11