

# NINGBOSANCO ELECTRONICS CO., LTD.

## A. SCOPE

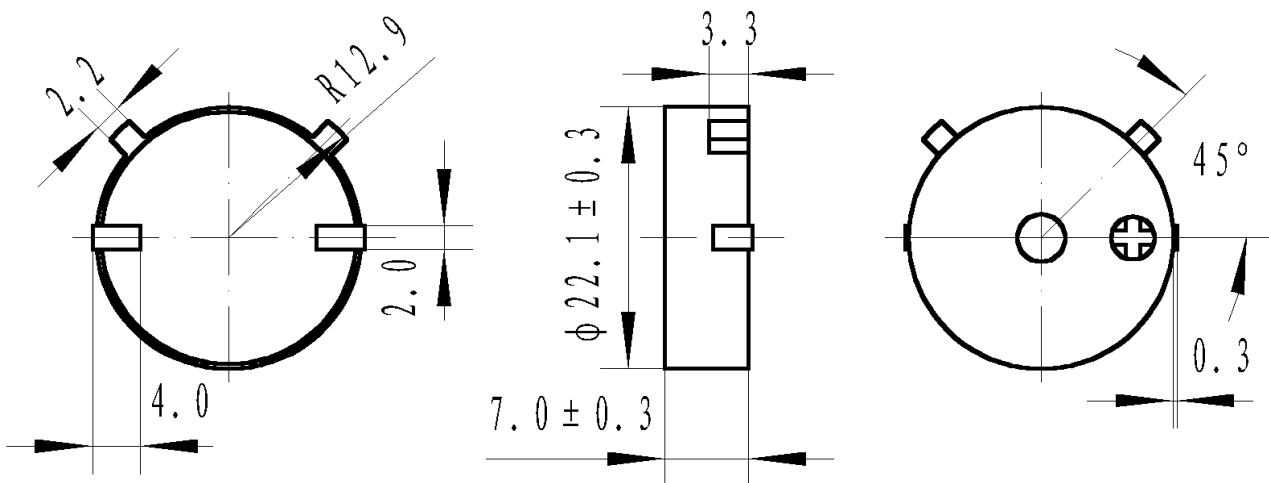
This specification applies Piezo buzzer, **SPT-2270A-12040**

## B. SPECIFICATION

1	Model No.	<b>SPT-2270A-12040</b>
2	Resonance Frequency (KHz)	4.0±0.5
3	Operating Voltage (Vp-p)	1~30
4	Capacitance at 120Hz (pF)	19000±30%
5	Sound Output at 10cm (dB)	≥95at 4.0KHz Square Wave 12Vp-p
6	Operating Temperature (°C)	-20~+70
7	Storage Temperature (°C)	-30~+75
8	Rated Current (mA)	≤5
9	Weight (g)	2.8
10	Housing Material	PPS
11	Piezo Element Metal Material	NiFe Alloy

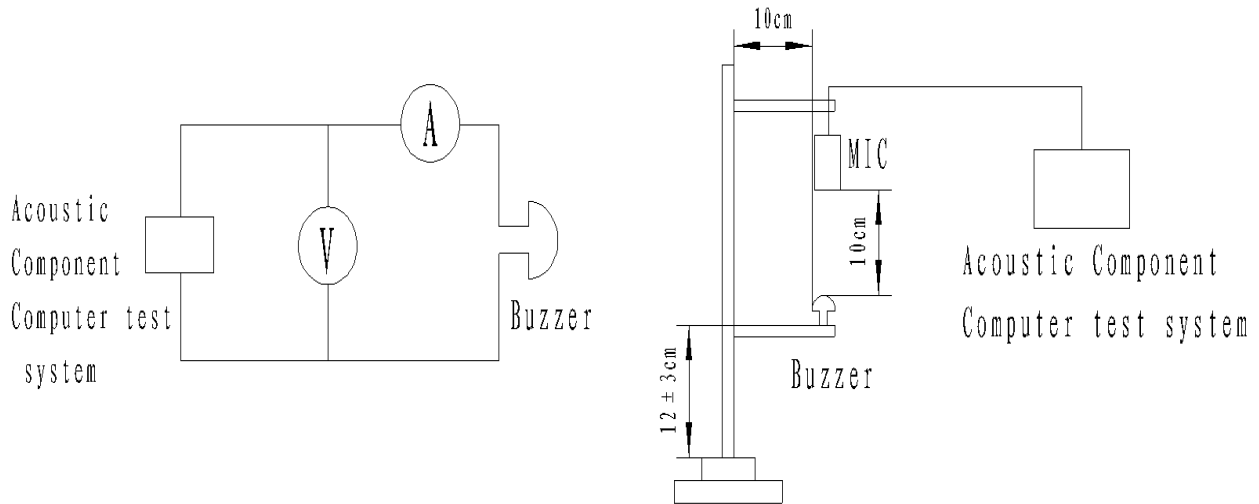
## C. DIMENSIONS (UNIT: mm)

Tolerance: ±0.5mm Except Specified

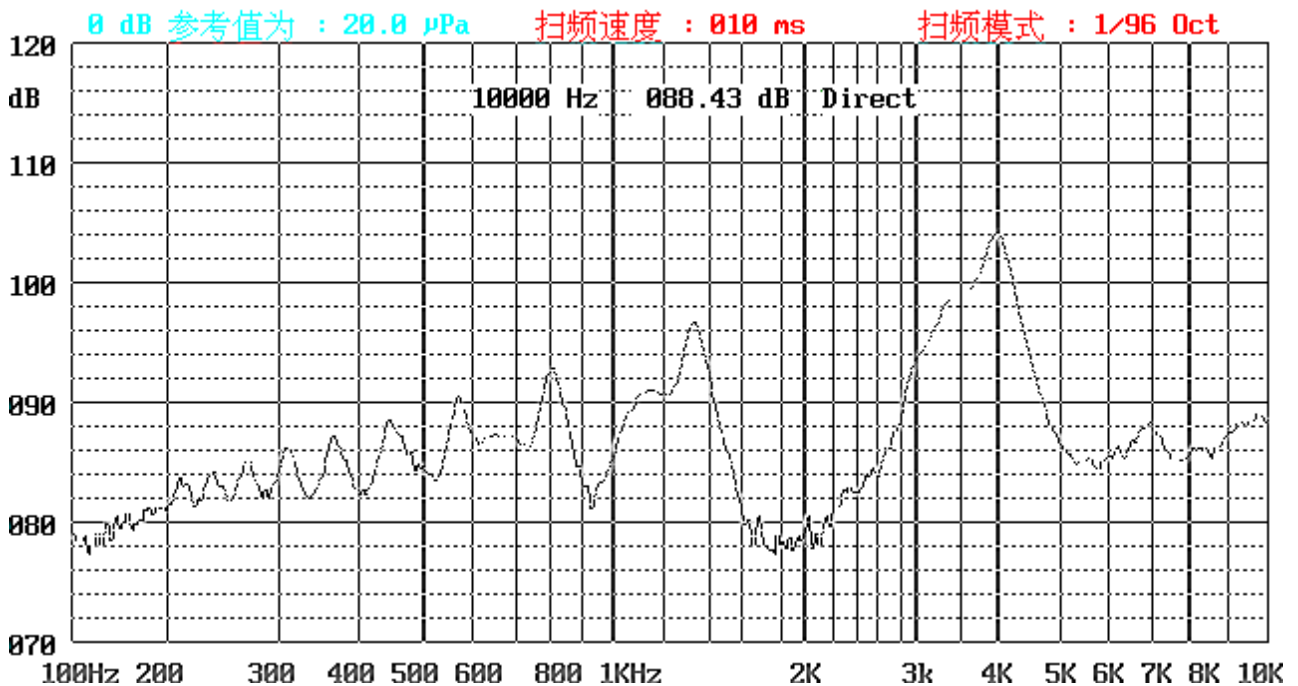


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## TEST METHOD:




## FREQUENCY RESPONSE:



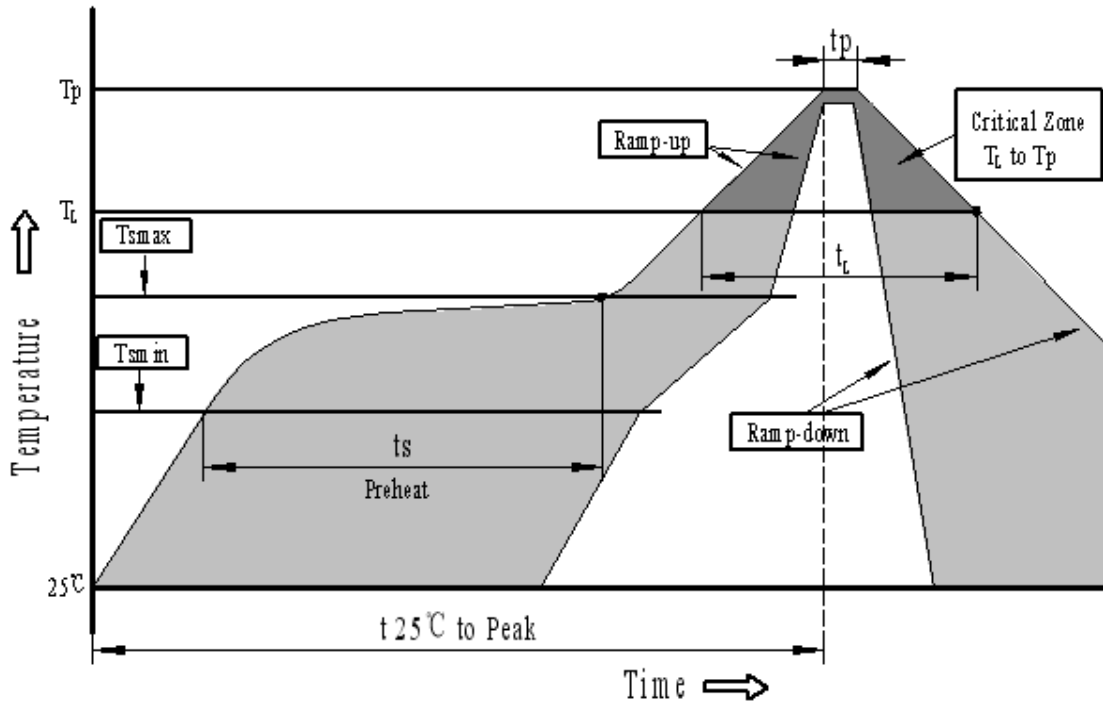
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## RELIABILTY TEST:

NO.	ITEM	TESTING CONDITION	VARIANCE AFTER TEST
1	Humidity	40±2°C, 95%RH, 120HRS	All specifications must be satisfied after the test.
2	<b>High temp.</b>	+75±2°C, 120HRS	
3	Low temp.	-30±2°C, 120HRS	
4	Temperature cycling	-30±2°C, 30minutes +20±2°C, 15 minutes +75±2°C, 30 minutes +20±2°C, 15 minutes 5 cycles	
5	Shock test	980m/s <sup>2</sup> , half sine wave, (X · Y&Z) each of 3 times	
6	Vibration test	10-55-10Hz, 1.5mm, 2 hours per plane	
7	Solderability	230°C±5°C for a period of 3.0±.5seconds	
8	Solder heat resistance	250±10°C for a period of 30 seconds.	After the test part shall meet specifications without any degradation in appearance and performance.
9	Lead pull	9.8N for 10±1 seconds 	After the test part shall meet specifications without any degradation in appearance and performance.
10	Recommended temp. Profile for Reflow Oven	Shown in Fig.1	
<p><b>Warranty:</b>For a period of one year from date of manufacture under normal operations.</p>			

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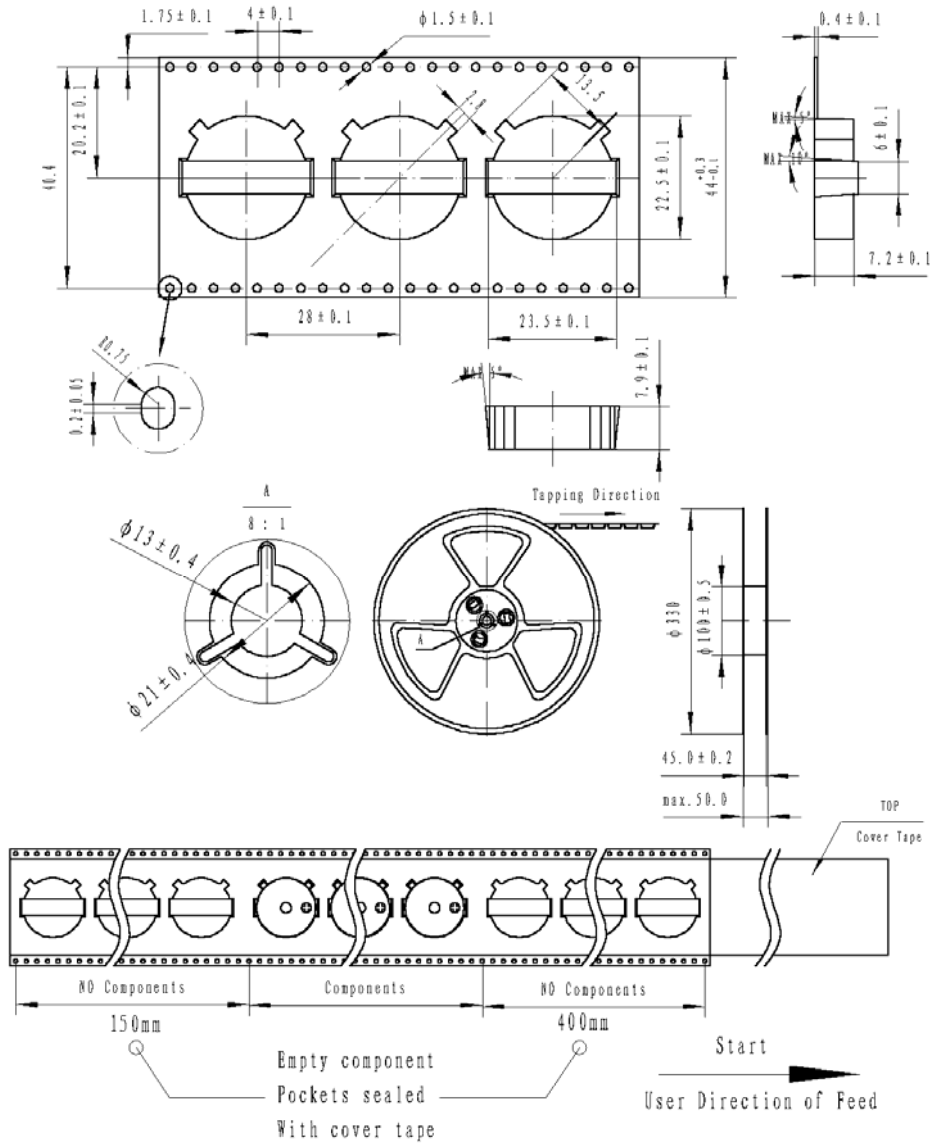
## Recommended Temp. Profile for Reflow Oven (Fig.1)



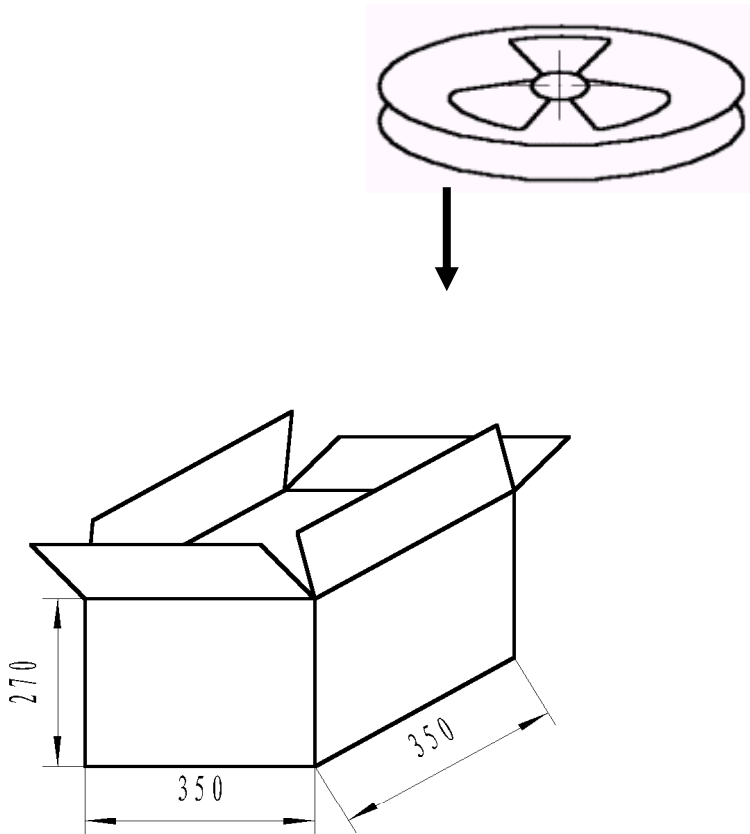
Profile Feature	Pb-Free Assembly
Average ramp-up rate( $T_L$ to $T_p$ )	3°C/second max.
Preheat	
-Temperature Min. ( $T_{smin}$ )	150°C
-Temperature Min. ( $T_{smax}$ )	200°C
-Temperature Min. ( $t_s$ )	60~180 seconds
$T_{smax}$ to $T_L$	
-Ramp-up Rate	3°C/second max.
Time maintained above:	
- Temperature ( $T_L$ )	217°C
-Time ( $T_L$ )	60~150 seconds
Peak temperature ( $T_p$ )	235°C+0/-5°C
Time within 5°C of actual Peak temperature ( $t_p$ )	6 seconds max.
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

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## PACKING:



## PACKING:



### NOTES:

1. 300 PCS per coil
2. Total 5 coil per carton
3. Total 1500 PCS carton
4. Volume:  $35 \times 35 \times 27\text{cm}$

1.