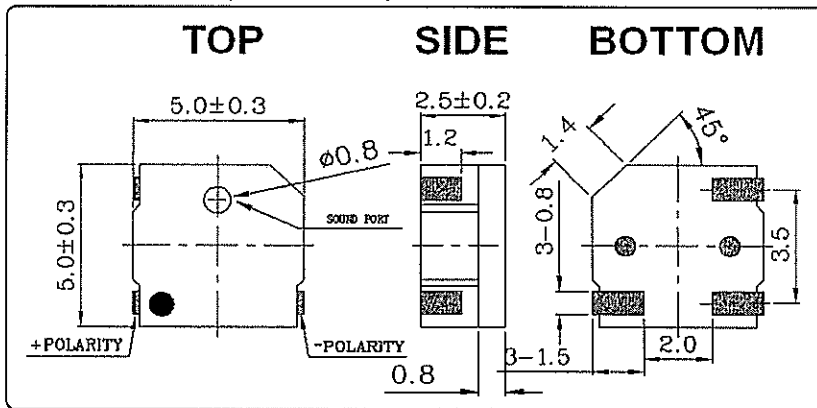


1. SPECIFICATIONS

PARAMETERS	VALUES	UNITS
*MIN SOUND PRESSURE LEVEL AT 10 CM	80	dBA
RATED VOLTAGE	3	Vo-p
OPERATING VOLTAGE	2 - 4	Vo-p
RESONANCE FREQUENCY	4,000	Hz
*MAX OPERATING CURRENT	110	mA
COIL RESISTANCE	12 ± 3	Ohm
OPERATING TEMPERATURE	-30 to +85	°C
STORAGE TEMPERATURE	-40 to +90	°C
HOUSING	LCP	-
TERMINAL MATERIAL	Tin plated Brass	-
WEIGHT	0.5	g

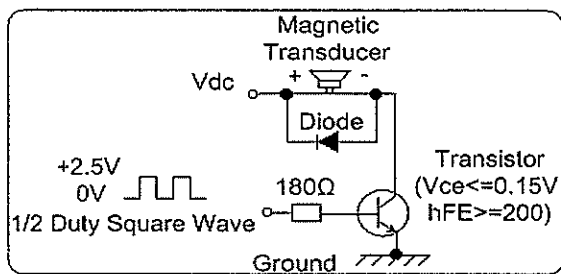
*Value applying rated voltage (1/2 duty square wave, resonance frequency)

2. DIMENSIONS (unit in mm)

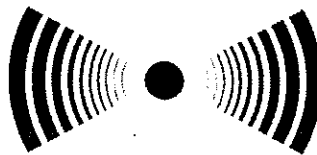


Tolerance: ± 0.5 mm except specified

3. RECOMMENDED CIRCUIT



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4. RELIABILITY TEST

a) HIGH TEMPERATURE TEST

After exposure at $+80 \pm 2^\circ\text{C}$ for 96 hours and room temperature for 2 hours, the value of frequency/current/SPL should meet specifications shown in page 2.

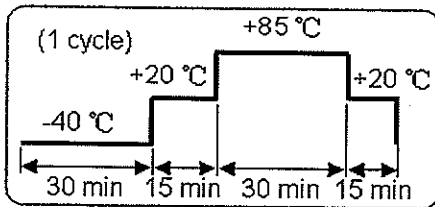
b) LOW TEMPERATURE TEST

After exposure at $-30 \pm 2^\circ\text{C}$ for 96 hours and room temperature for 2 hours, the value of frequency/current/SPL should meet specifications shown in page 2.

c) HUMIDITY TEST

$25 \pm 2^\circ\text{C}$, 90-95%RH, 5hr=>up to $55 \pm 2^\circ\text{C}$, 90-95%RH, 0.5hr => $55 \pm 2^\circ\text{C}$, 90-95%RH, 5hr=>down to $25 \pm 2^\circ\text{C}$, 90-95%RH, 0.5hr, 10 cycles

d) THERMAL SHOCK TEST



After exposure to above temperature cycle for 5 times and room temperature for 2 hours, the value of frequency/current/SPL should meet specifications shown in page 2.

e) VIBRATION TEST

After vibrating the object with 1.5mm amplitude at 10 - 50 Hz in 3 perpendicular directions for 2 hours each, the value of frequency/current/SPL should meet specifications shown in page 2.

f) DROP TEST

After Dropping naturally from 700mm height onto the surface of 10mm wooden board with 3 directions, the value of frequency/current/SPL should meet specifications shown in page 2.

g) SOLDERING HEAT RESISTANCE

Samples put through reflowing soldering oven 2 times

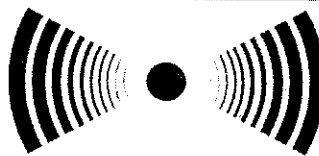
h) SOLDERABILITY

Samples put on PCB with solder paste through reflowing soldering oven 1 times

i) WARRANTY

For a period of one (1) year from date of manufacture under normal operations

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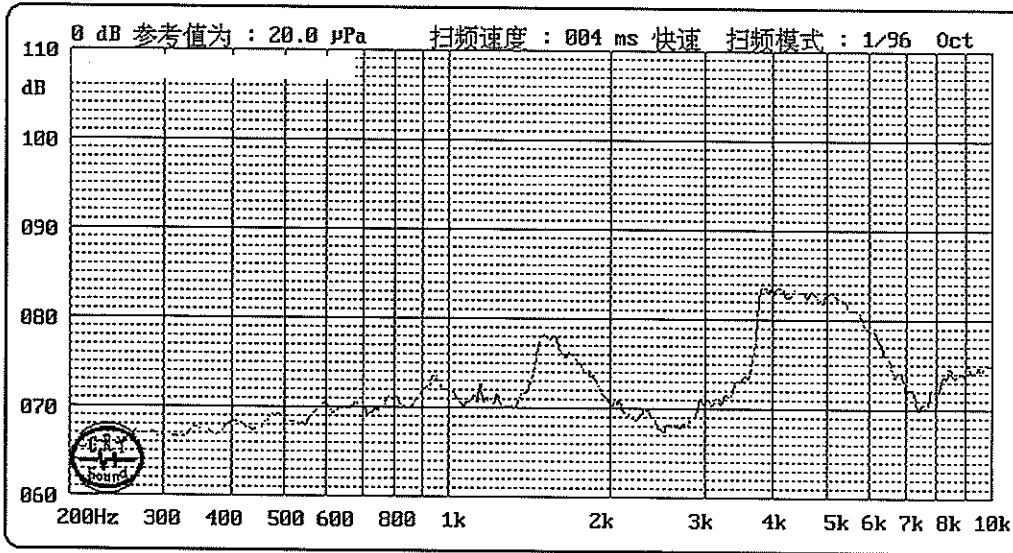
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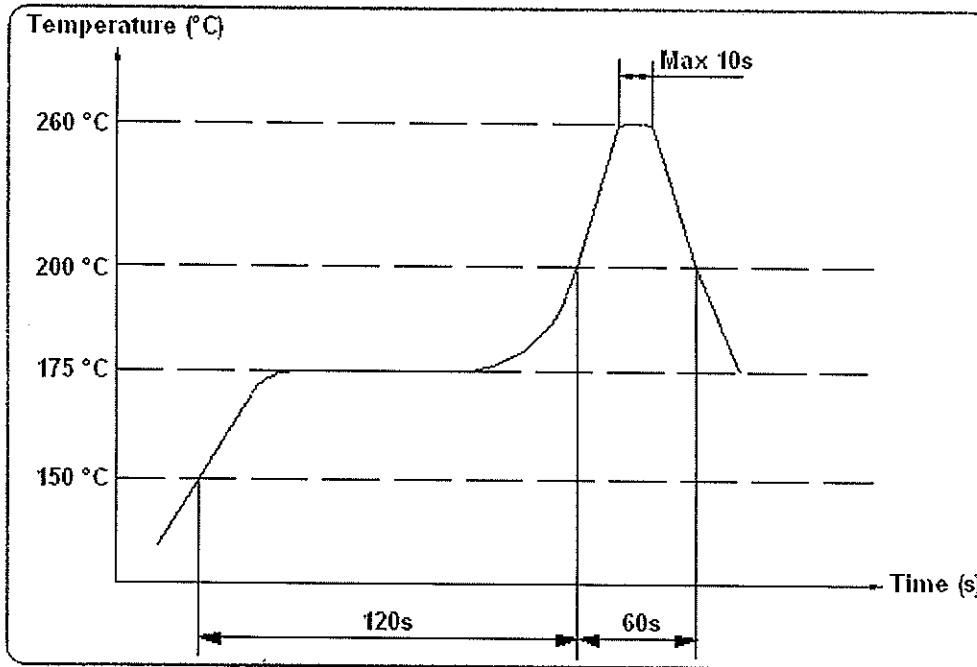
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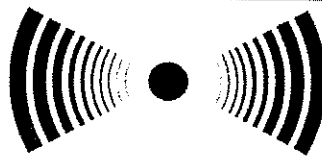
5. TYPICAL FREQUENCY RESPONSE



6. RECOMMENDED REFLOWING PROFILE



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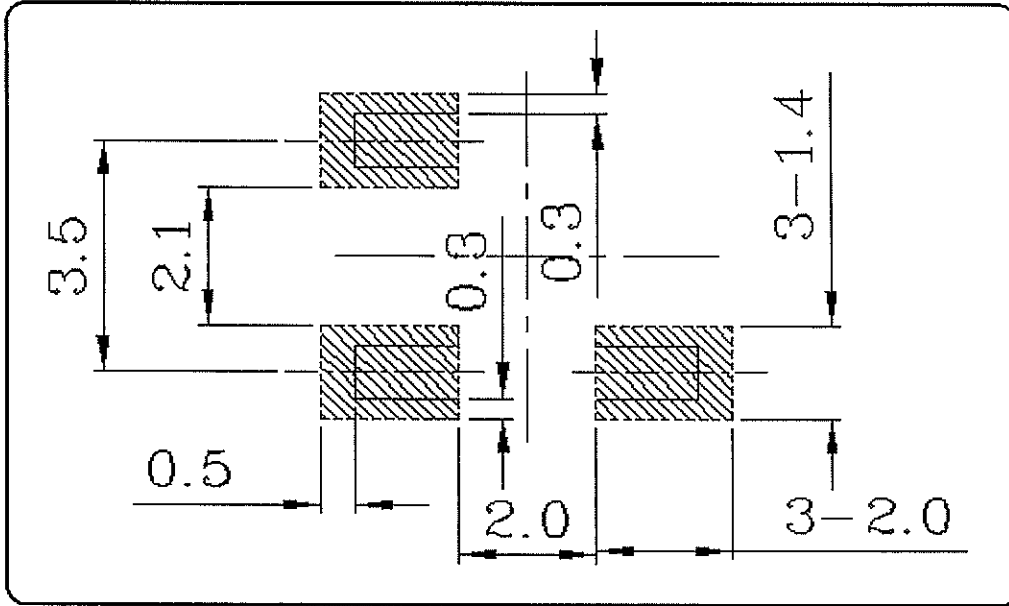
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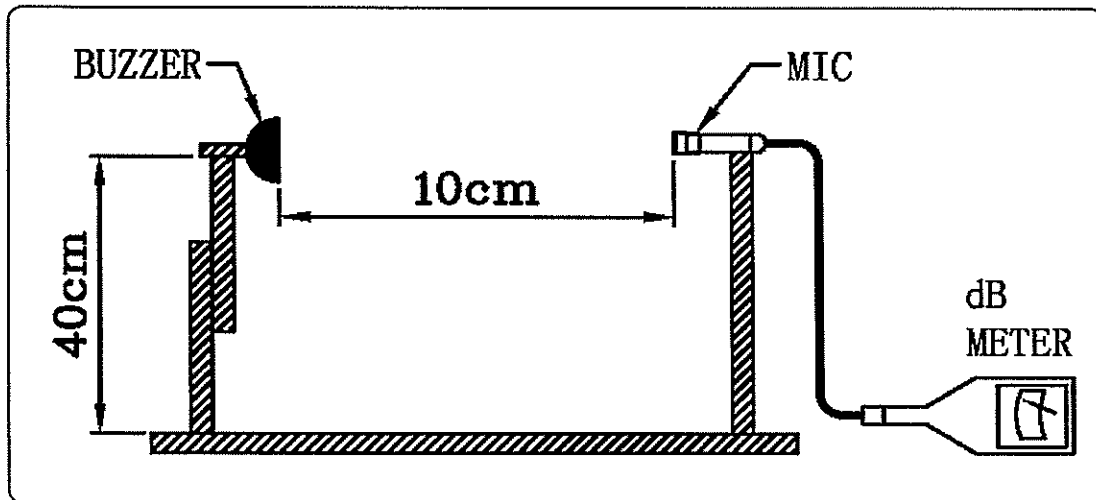
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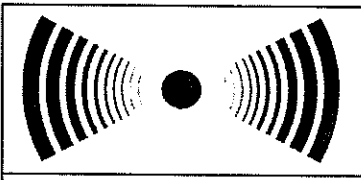
7. RECOMMENDED CUSTOMER PCB PATTERN



8. MEASURING CONDITION



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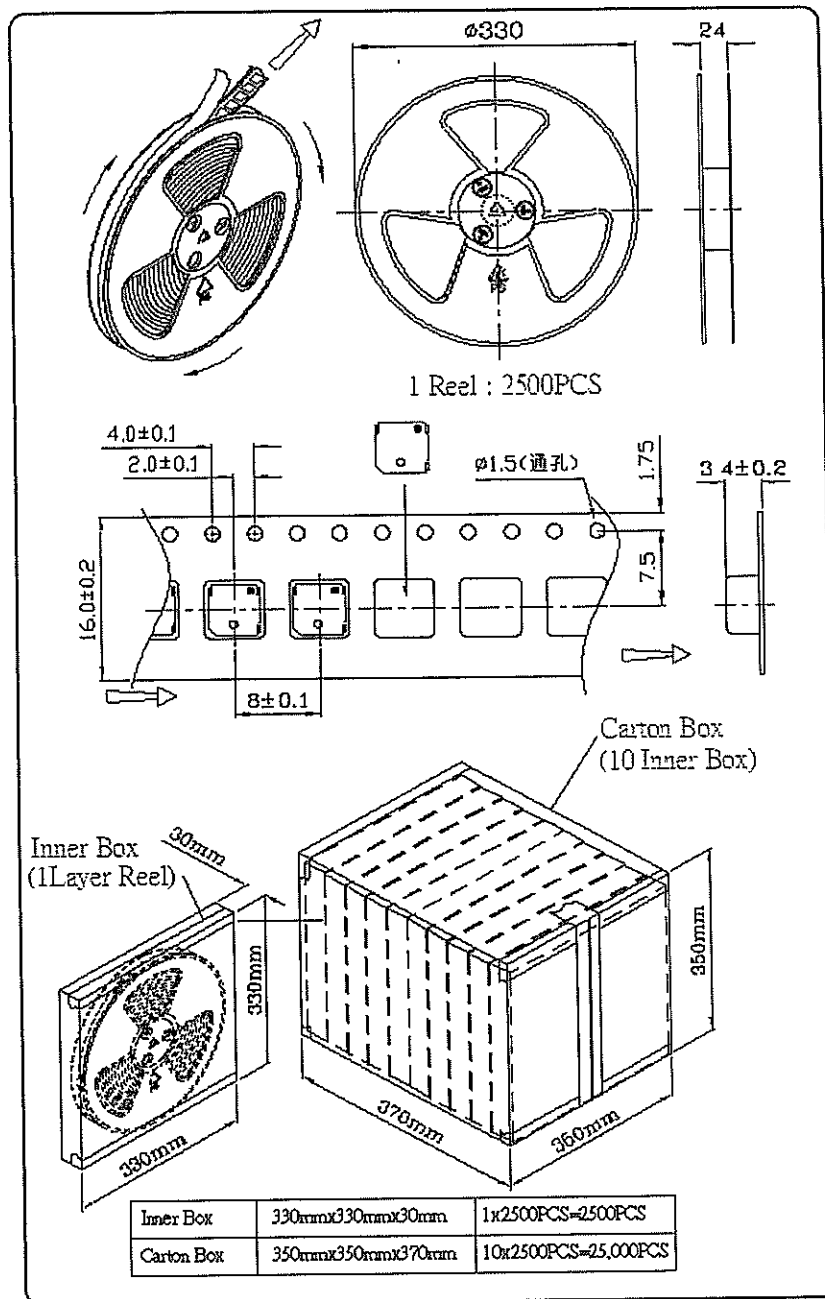
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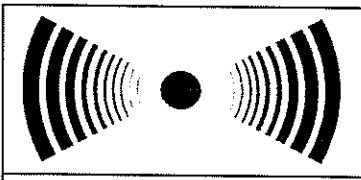
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9. PACKING INFORMATION



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