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Component Specification

Product : Speaker
Part Number : CA-SP4028A-0420
Drawing No : 3030211-022

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1. General

Speaker highly suitable for industrial applications.

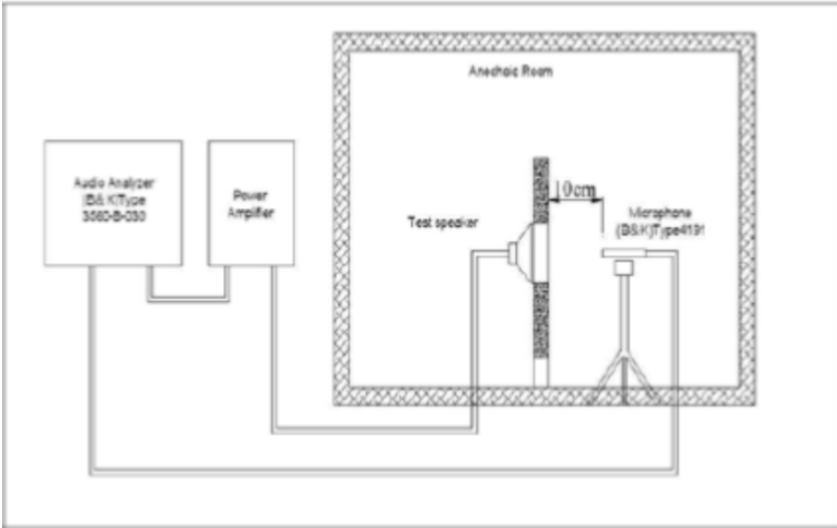
2. Electrical and Acoustic Characteristics

No	Items	Specification
	Impedance	$4\Omega \pm 15\%$ at 1500 Hz/1V
	Sound Pressure Level	91dB \pm 3dB at 0.1W/0.1m, average at 1.0 1.2 1.5 2.0 kHz
	Resonance Frequency	450Hz \pm 20% at 1 V
	Frequency Range	F0 ~ 8KHz
	Input Power	Rated 2.0W / Max. 3W
	Distortion	< 5% Max. at rated power 1.0 kHz
	Buzz and Rattle	Should not be audible buzzes, rattles when the 2.83V sine wave signal swept at frequency range.
	Dimensions	40x28x10.9mm
	Weight	10.8 g
	Operating Temperature range	-20~+80 °C
	Store Temperature range	-25~+80 °C

10	20.03.21	Primary release	S. Chen	S. Ge	G.Schubert
Revision	Date	Notes	Drawn by	Checked by	Approved by

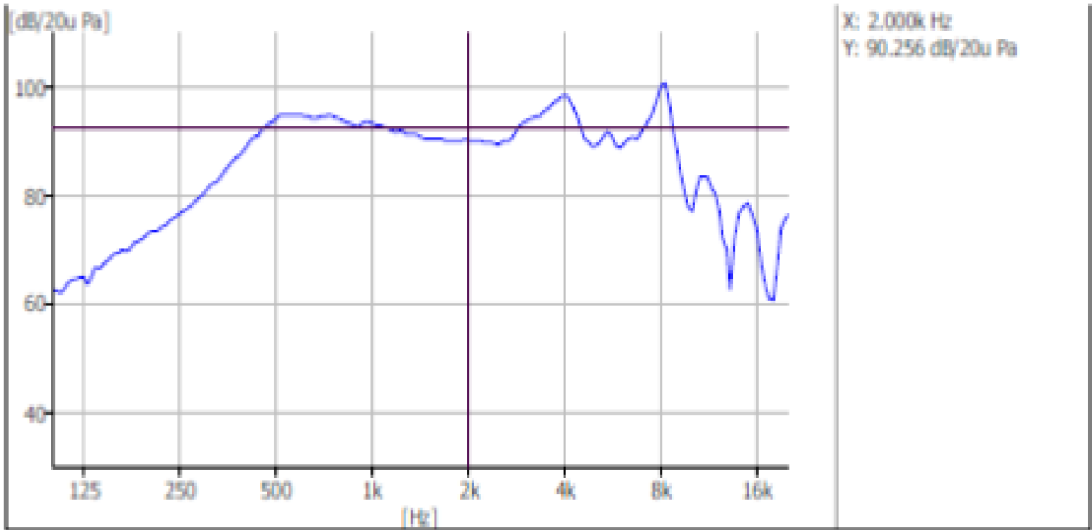
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3. Test Circuit




Test Conditions:
Temperature: 15-30 ± 3°C
Relative humidity: 25% ~ 80%
Atmospheric pressure: 860 to 1060mbar

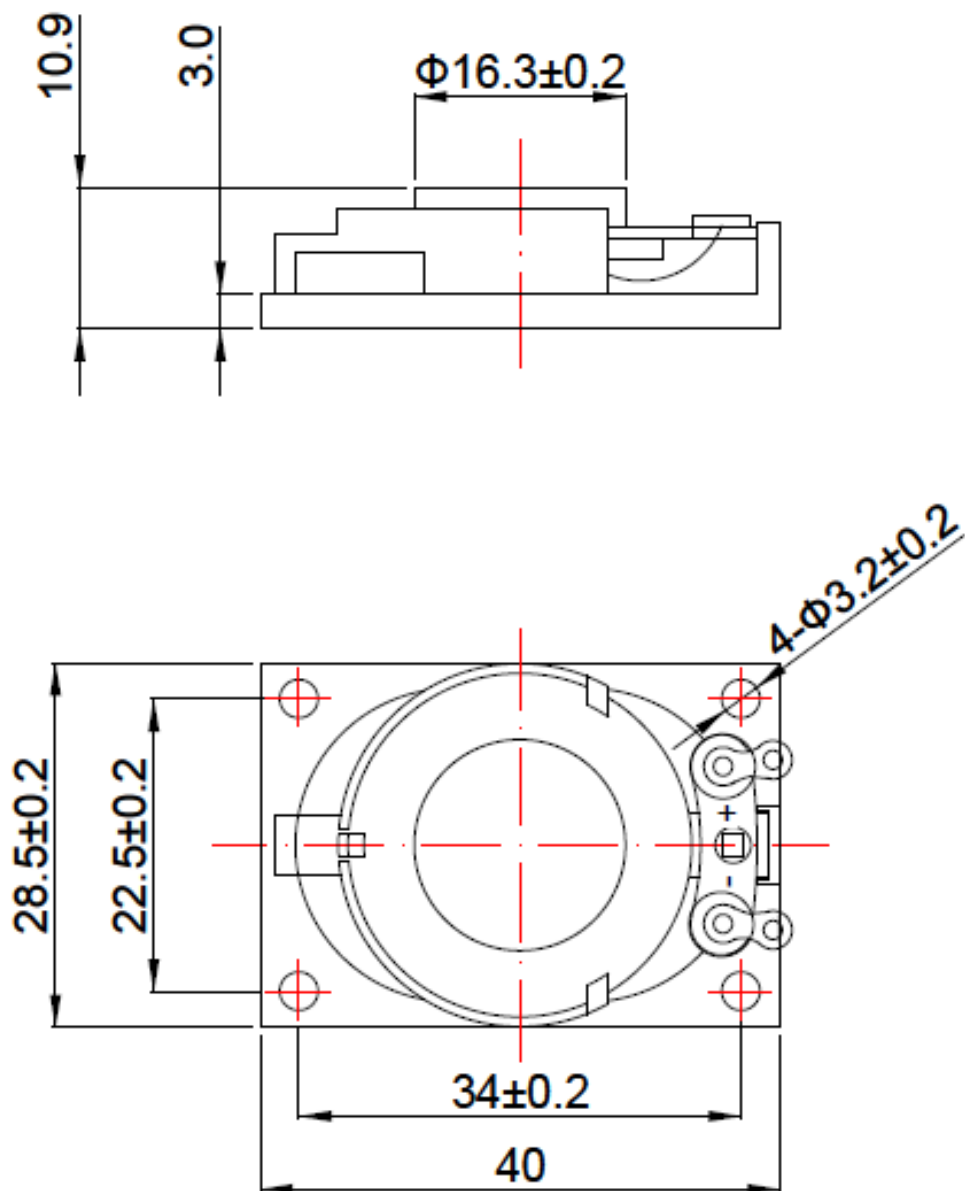
4. Frequency Response Curve




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5. Dimension & Structure



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6. Reliability Test

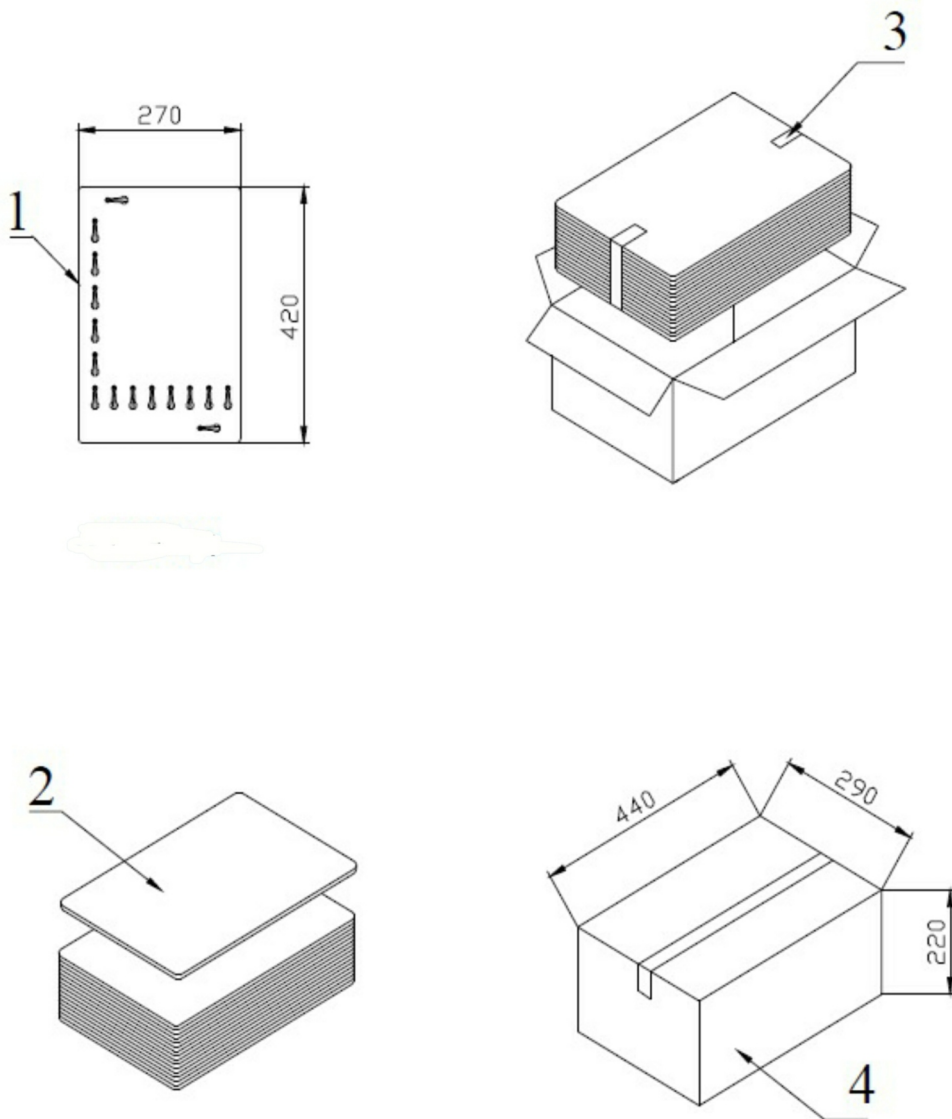
No	Items	Specification
1	High Temperature Test	After being placed in a chamber with $80\pm3\text{ }^{\circ}\text{C}$ for 10 hours and then being placed in natural condition for 1 hour, speaker shall be Measured.
2	Low Temperature Test	After being placed in a chamber with $-25\pm3\text{ }^{\circ}\text{C}$ for 10 hours and then being placed in natural condition for 1 hour, speaker shall be Measured.
3	Humidity Test	After being placed in a chamber with 80 to 90%R.H. at $+55\pm3\text{ }^{\circ}\text{C}$ for 5 hours and 6 cycles , then being placed in natural condition for 3 hour, speaker shall be measured.
4	Thermal Shock Test	After being placed in a chamber at $+80\text{ }^{\circ}\text{C}$ for 60 min, then speaker shall be placed in a chamber at $-25\text{ }^{\circ}\text{C}$ for 60 min (1 cycle). After 6 above cycles, speaker shall be measured after being placed in natural condition for 60 min.
5	Vibration Test	After being applied vibration of amplitude of 1.5mm with 10 to 55Hz band of vibration frequency to each of 3 perpendicular directions for 1 hour, then placed in natural condition for 1 hour, speaker shall be measured.
6	Drop Test	The speaker when mounted in the jig which weight 85g~100g, shall with stand 4 times random drops from a height of 1.0 meter to a concrete floor faced with 5mm thick hard wood board. and be nothing mechanical damage.
7	Load Test	After being applied loading white noise with input power of 2.0W (2.83 Vrms) for 24 hours then placed in natural condition for 1 hour, speaker shall be measured.
8	Insulation Test	When they are measured with DC 100V the insulation resistance between v.c. Terminal and frame must be more than 100 Mohm.

After test the speaker S.P.L. Difference shall be within $\pm 3\text{ dB}$, and the appearance not exist any change to be harmful to normal operation (e.g. Cracks, rusts, damages and distortion)

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7. Packing



QTY: 500Pcs
440 x290 x220

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8) Revision

Rev. No	Date	Page	Description	Sign
10	20.03.21	all	Preliminary release	G.Schubert

10	20.03.21	Primary release	S. Chen	S. Ge	G.Schubert
Revision	Date	Notes	Drawn by	Checked by	Approved by