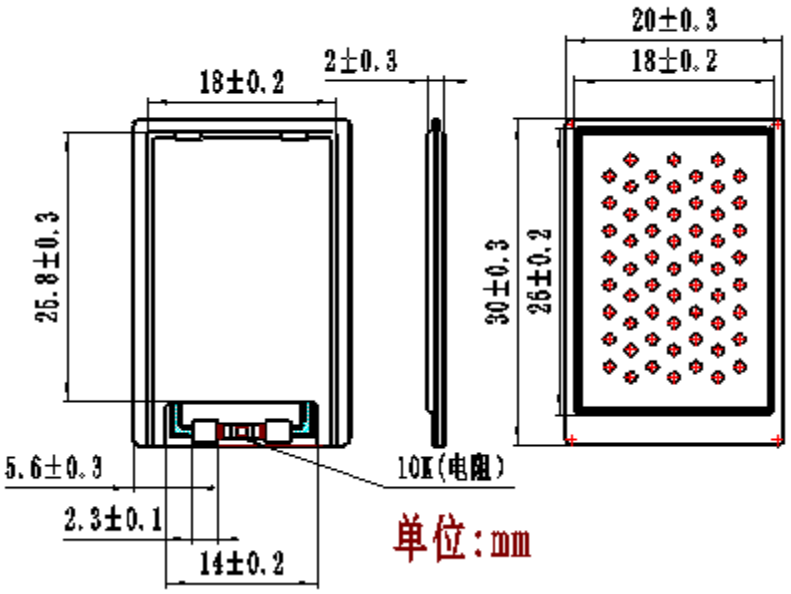
Multilayer Piezo Speaker Specification

■ Model number：MT0006-011//AWMT3020Y05-126

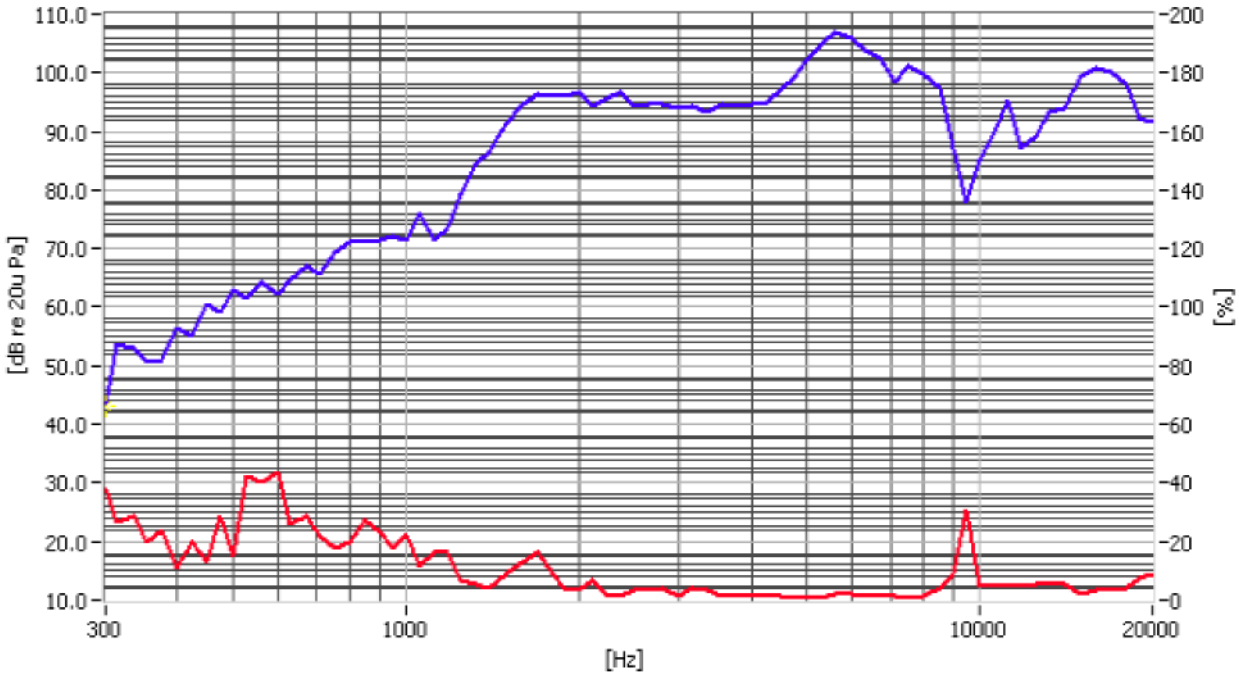
■ Electrical performance parameter

No.	Item	Unit	Specifications	Test conditions
1	Sound Pressure Level	dB	80Min.	B&K(10cm/5Vrms/at muffle room) (Average at 4-point：1KHz、1.5KHz、2KHz、2.5KHz)
2	Electrostatic Capacity	nF	1300±30%	Digital electric bridge (120Hz/1V/25℃)
3	Resonant Frequency	Hz	1300±100	B&K (5Vrms)
4	Frequency Range	Hz	300~20000	------
5	Max Input Voltage	Vp-p	16	------
6	Operating Temp.	℃	-20 ~ +70	------
7	Storage Temp.	℃	-30 ~ +85	------

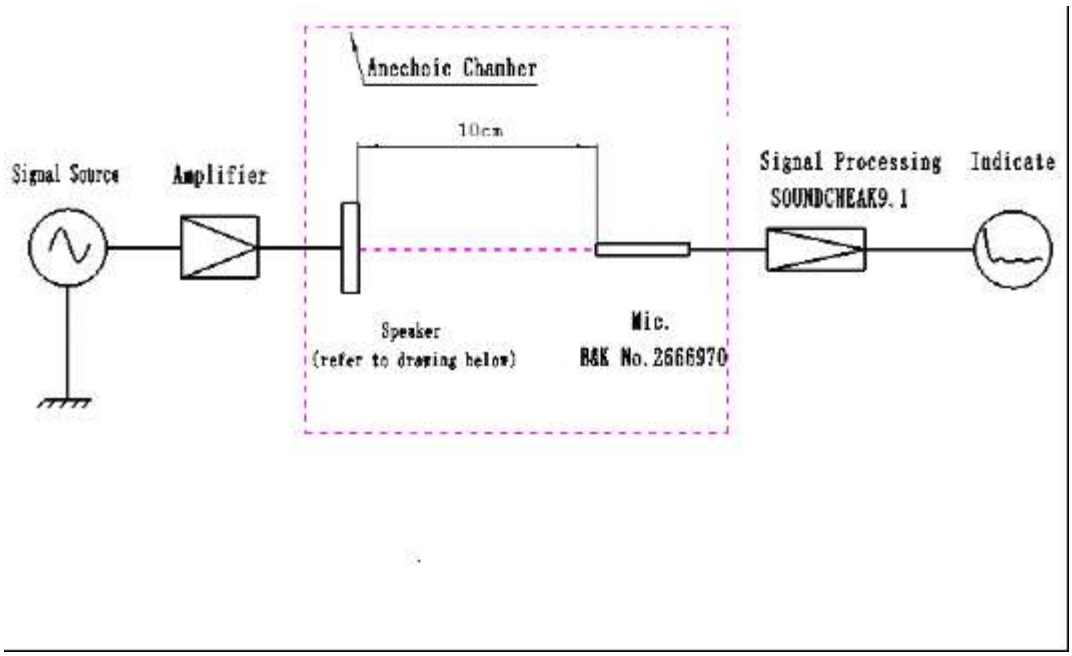
■ **Appearance and Dimensions**:



Typical Frequency Curve:



Test method:



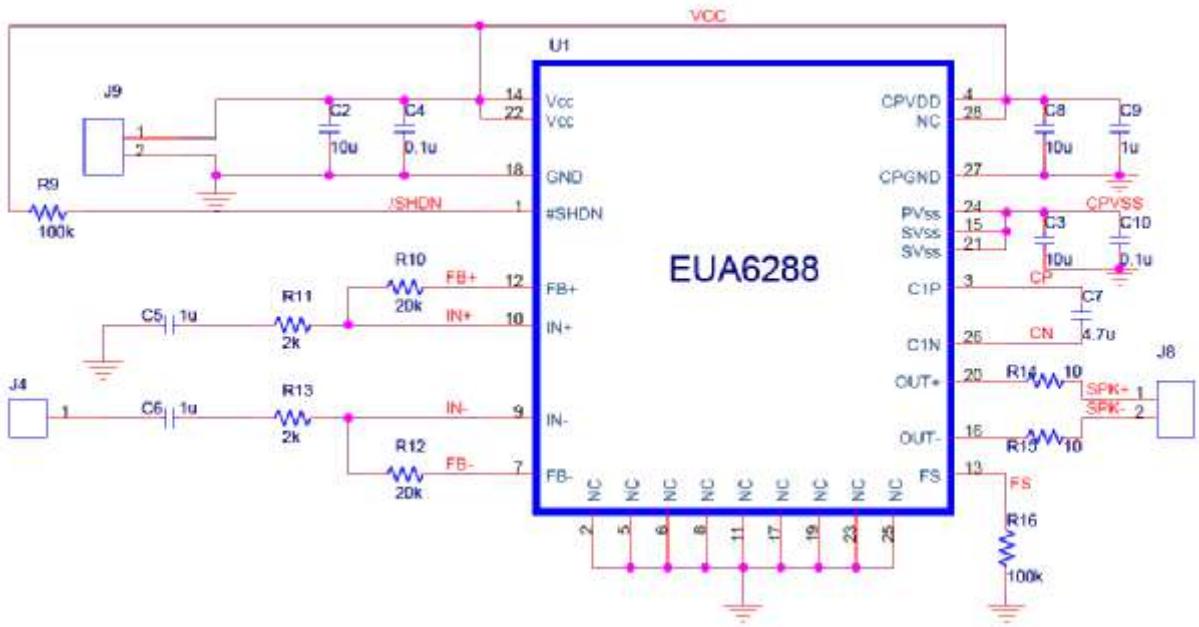
■ Environment Test

NO.	Pilot projects	Test requirements	Standard test
1	Vibration Test	The test was carried out at room temperature, sweeping 10-55 Hz/amplitude 1.5 mm/XYZ axis/2 hours	The sound pressure after the test is satisfied: Initial average ±3dB requirement (1KHz/1.5KHz/2KHz/2.5KHz)
2	Drop Test	The product is assembled in a tooling with a quality of 150g, and the vertical drop of 6 faces is performed, and each falling face is performed 3 times, and the drop height is 150 cm.	
3	Salt spray corrosion	Conducting salt spray corrosion on the circuit board for 24 hours (+35 ° C, 5% by mass of sodium chloride)	The test was carried out after 4 hours in an environment of +25 ± 3 ° C (room temperature). A slight oxidation is allowed, but the solderability test is acceptable, and the sound pressure meets the initial average of ±3 dB. (1.5KHz /2.0KHz/2.5KHz/2.5KHz)
4	High temperature storage	85 ± 2 ° C / 240 hours, then placed at room temperature for 4 hours	The sound pressure after the test is satisfied: Initial average ±3dB requirement (1KHz/1.5KHz/2KHz/2.5KHz)
5	Low temperature storage	-30 ± 2 ° C / 240 hours, then placed at room temperature for 4 hours	
6	High temperature and high humidity	+60 ± 2 ° C / RH90 - 95% / 240 hours, then placed at room temperature for 4 hours	
7	High temperature and high humidity	+60±2° C/RH90—95%/240 hours/5Vrms signal (sweep range 300~20000Hz, step size 10Hz, period 10s), then place at room temperature for 4 hours	

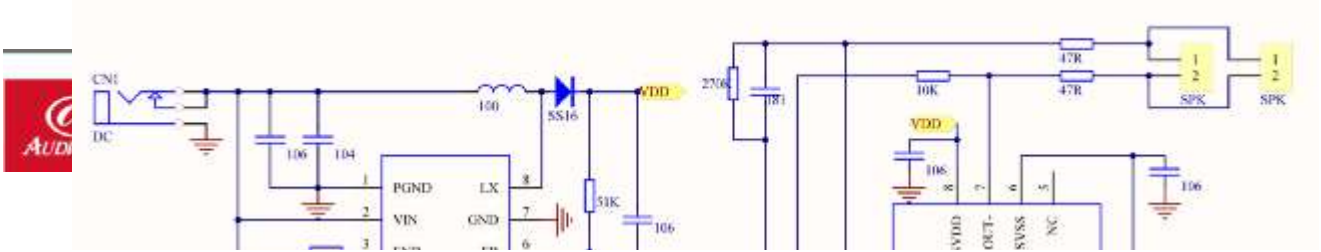
8	Thermal shock	-30 ° C / 30 minutes, placed at +85 ° C / 30 minutes in 2 - 3 minutes, 20 cycles, then placed at room temperature for 4 hours	
9	Highest pressure test	Load 16Vpp/0.5 hour signal at normal temperature (sweep range 300~20000Hz, step size 10Hz, period 10s), set the voltage to the maximum voltage required in the specification, and then place it at room temperature for 4 hours.	
10	Life test	The test was carried out at room temperature, 5 Vrms / 1 KHz signal, continuous operation for 240 hours,	

■ Application Circuit example:

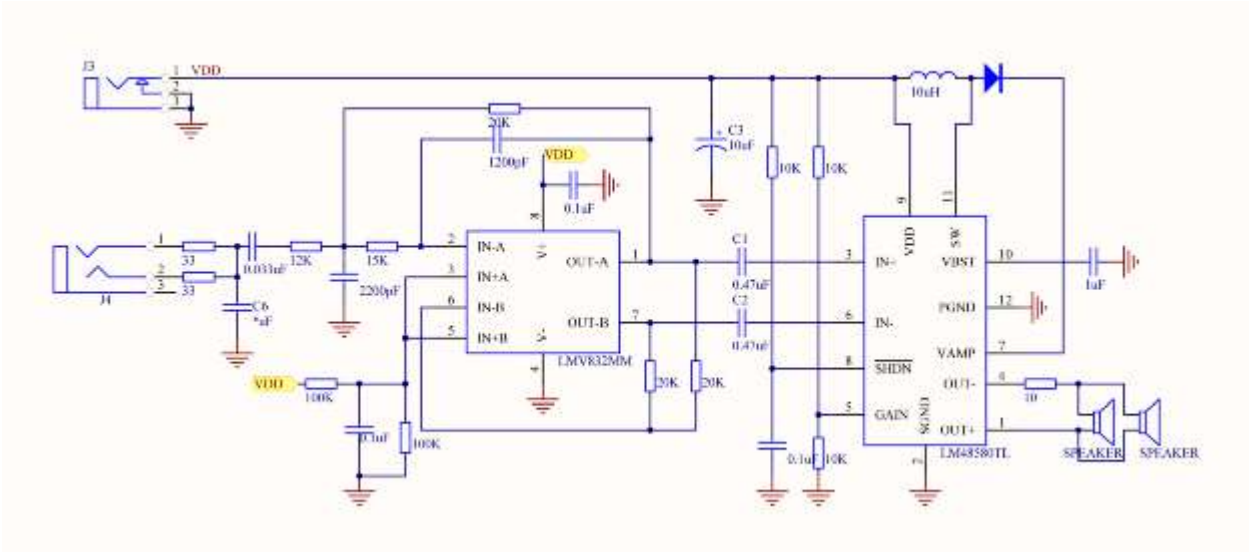
1 Application line: Dexin EUA6288 (Vout: 14V)



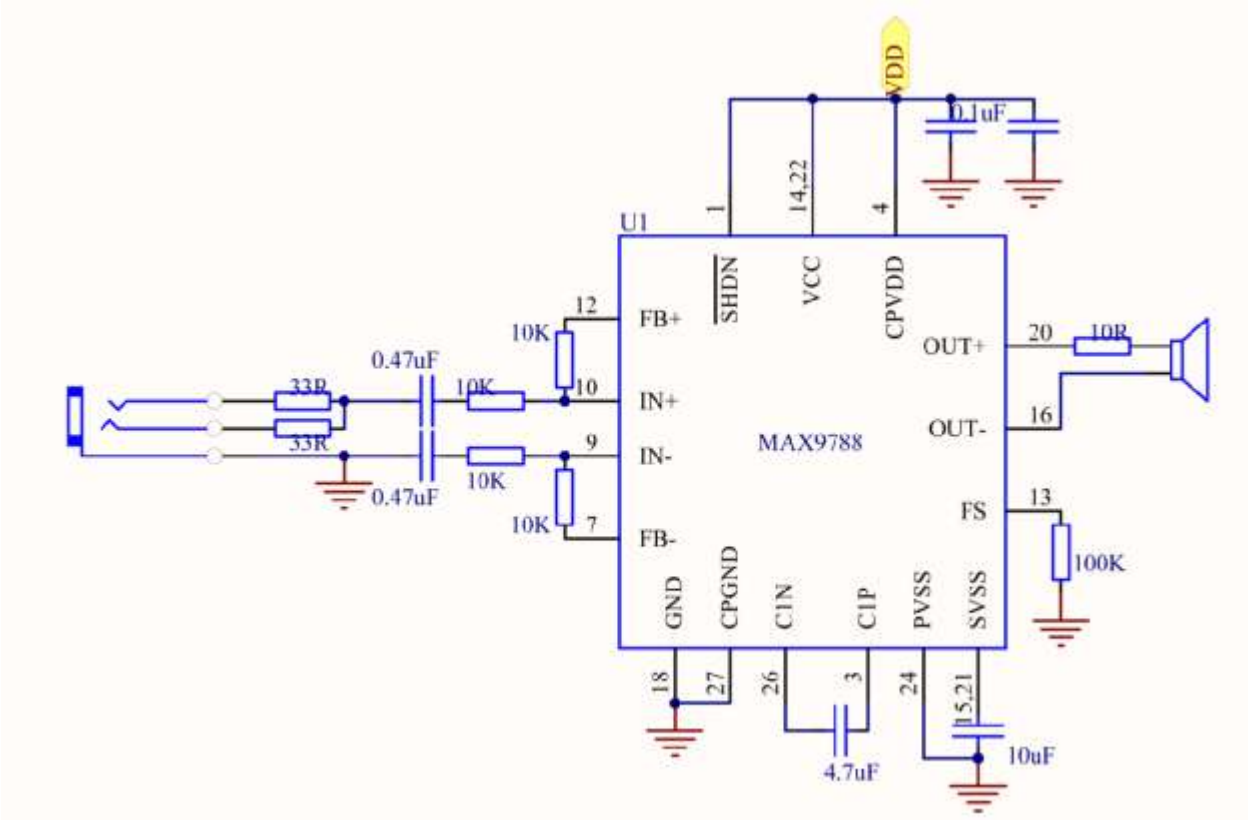
2 Application line: SN3500+SN4915 solution (Vout: 20V)



3 Application line: LMV832MM+LM48580TL solution (Vout: 24V)



4 Application line: MAX9788 solution (Vout: 14V)



The above several schemes have a low voltage signal of 2.7~5.5V. If a higher power supply voltage signal is used, other schemes can be adopted.

■ Installation suggestions and precautions:

10.1 When assembling and installing, the front cover and the back cover of the sound chamber can be carried out by the front and rear covers of the whole product, for example, the battery cover, the middle frame and the front cover of the mobile phone form a closed sound chamber;

10.2 Avoid accidents that may cause noise, vibrato or resonance in the speaker. For example, other structural components or electronic components around the speaker are not firmly installed, resulting in looseness; the speaker audio access line is in contact with the vibration and vibration of the speaker; the speaker itself is not fixed firmly;

10.3 When fixing the speaker, ensure that the sealing adhesive and the surrounding structural support are sealed to form a closed chamber, and no air leakage occurs. The soundproof hole is recommended to use the proposed structure; the front cover of the sound chamber is generally higher than the height of the speaker. Recommended ≥0.5mm or more;

10.4 When installing other structural parts or electronic components in the back cover of the sound chamber, keep a space of ≥0.5mm or more to ensure that there is no contact or friction with the speaker;

10.5 It is recommended that the rear sound chamber be separately designed and completely sealed. The volume is generally ≥0.7cc. The larger the volume, the more

obvious the sound quality improvement of the low frequency. When assembling, the back sound chamber should be sealed to avoid the sound leakage, affecting the sound quality and volume. ;

10.6 When installing the speaker, avoid applying a large force to the vibrating portion of the speaker in the vertical direction.

File revision history			
Revsion time	Version of revision	The number of ECR	Contents of revision
2016/2/18	A1	/	New Creation
2016/3/115	A2	N-ECR-1700336	Increasing a resistor