



Rectangular loudspeaker

20 × 40 × 8.4 mm

CR4020L084HN16

Revision

Date	Version	Status	Changes	Approver
2019/7/3	V0.1	Draft	First release	AX
2020/5/9	V0.2	Draft	Update gasket to ring	AX

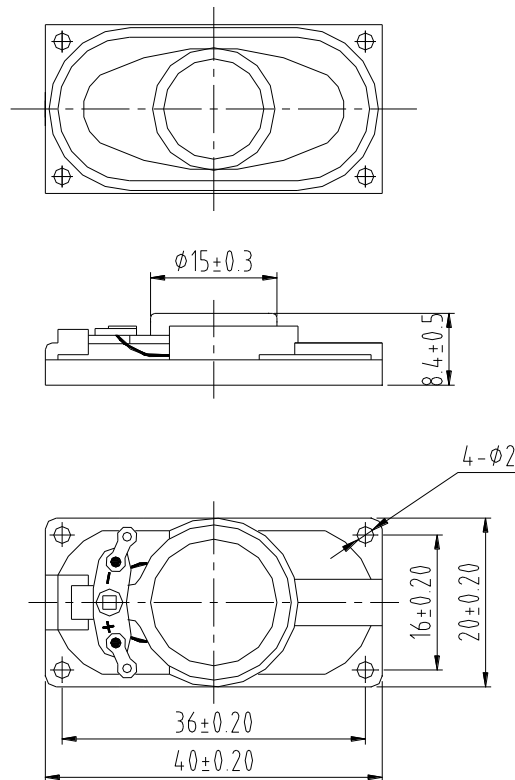
SPECIFICATIONS

Parameter	Conditions/Description	Values	Units
Rated Input Power		1.0	W
Max Input Power		2.0	W
Impedance		16±15%	Ω
Sound Pressure Level (S.P.L.)	at 0.8K 1.0K 1.2K 1.5KHz in 1.0W/0.5M average (0dB SPL=20μPa)	85±3	dB
Resonant Frequency (Fo)	at 1.0 V	600±20%	Hz
Frequency Range	Output S.P.L. -10dB	Fo~20K	Hz
Distortion	at 1K Hz, input 1.0W,	< 10%	-
Magnet	NdFeB	Φ11	mm
Buzz, Rattle, etc.	must be normal at sine wave between Fo ~ 5K Hz	4.0	V
Polarity	cone will move forward with positive dc current to “+” terminal		
Weight		7±8%	g
Operating Temperature		-25~+60	°C
Storage Temperature		-25~+60	°C
Waterproof		N/A	

Above Measuring condition under temperature : 15~35°C R.H. 25 ~75%.86 kPa to 106 kPa (860 mbar to 1 060 mbar According to standard GB/T 9397—200X and IEC 60268-1

MECHANICAL DRAWING

Units: mm

Tolerance: $\pm 0.5\text{mm}$ 

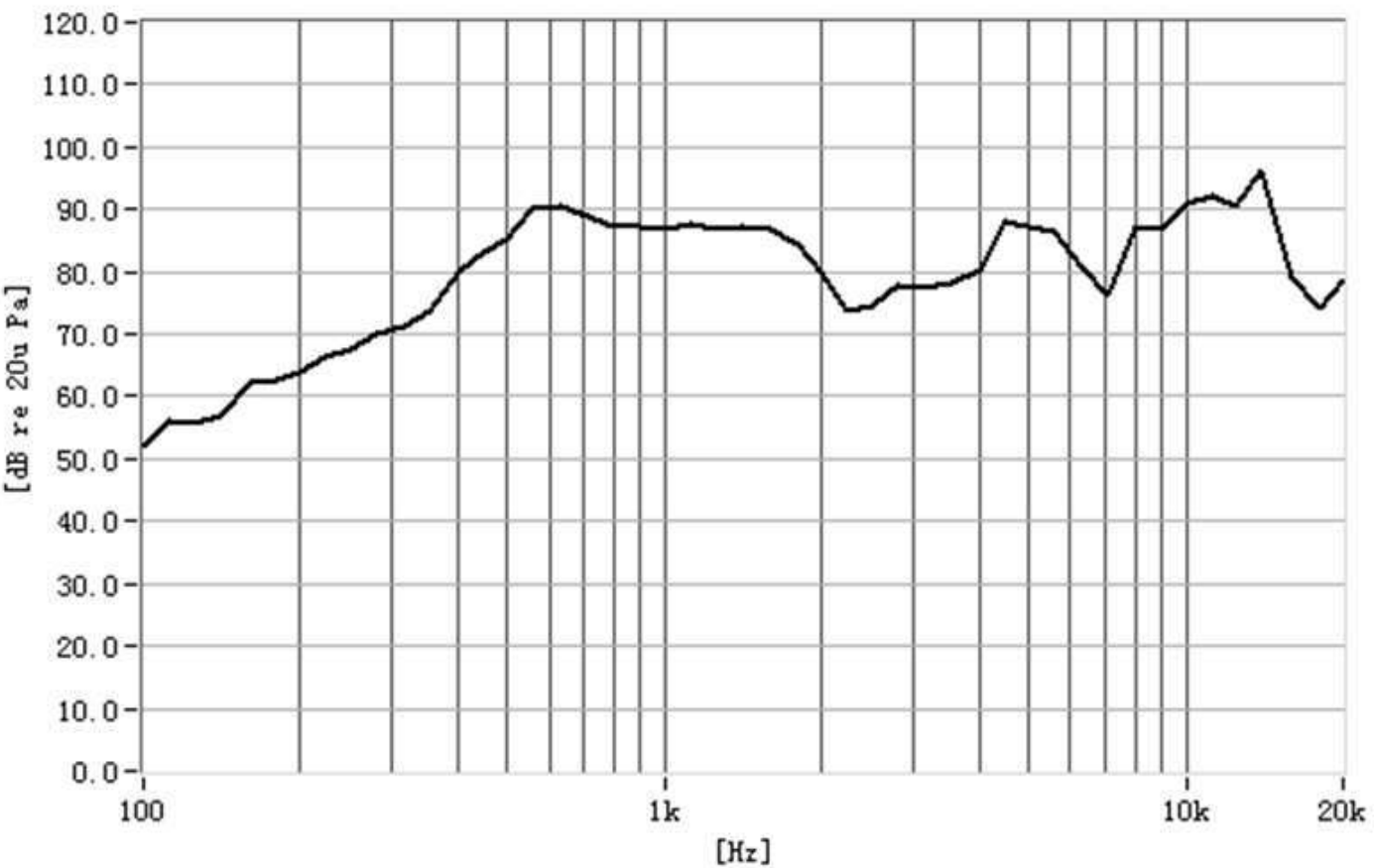
CONSTRUCTION DETAIL

PART NO.	PART NAME	Q'TY	MATERIAL	REMARK
1	RING	1	Paper	
2	Diaphragm	1	Cloth	
3	VOICE COIL	1	Paper Cu	
4	Plate	1	SPCC	
5	Magnet	1	NdFeB	
6	PCB Terminal	1	Paper+steel	
7	Frame	1	ABS	

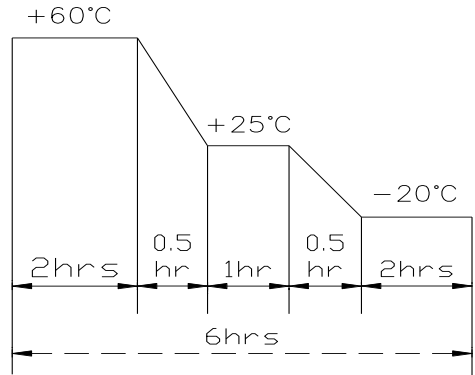
RESPONSE CURVES

Frequency Response Curve

Test condition: 1.0W/0.5M,



RELIABILITY TEST

1	Reliability Test Performance	After any following test, parts should conform to original performance within ± 3 dB tested with Rated Power, after 6 hours of recovery period.
2	High Temperature Operation and Storage	$+ 60 \pm 2$ °C Humidity Random for 96 Hours. (GB/T 9397—200X)
3	Low Temperature Operation and Storage	$- 25 \pm 2$ °C Humidity Random for 96 Hours. (GB/T 9397—200X)
4	Humidity Test	$+40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ Relative Humidity(RH)90~95% 48 Hours
5	Temp Cycle	The part shall be subjected 4cycles. One cycle shall be 6 hours and consist of (GB5170.18-87)  The diagram illustrates a temperature cycle profile over a 6-hour period. It consists of three temperature levels: $+60^{\circ}\text{C}$, $+25^{\circ}\text{C}$, and -20°C. The cycle is divided into segments with the following durations: 2hrs at $+60^{\circ}\text{C}$, 0.5 hr ramping down to $+25^{\circ}\text{C}$, 1hr at $+25^{\circ}\text{C}$, 0.5 hr ramping down to -20°C, and 2hrs at -20°C. The total duration of one cycle is 6hrs.
6	Vibration Test	Frequency 30 ± 15 Hz, Amplitude 1.5 mm for 3 Hours. (GB11606.8-89)
7	Drop Test	75 CM free falling on Concrete floor, 10 times. (GB2423. 8-81)
8	Load test	Must perform normal with program White-Noise source at Rated Power for 96 Hours(GB/T 9397—200X)
9	Termination Strength	Apply 3.0N(0.306kg) to each terminal in horizontal direction for 30 seconds; Apply 2.0N(0.204kg) to each terminal in vertical direction for 30 seconds;

MEASURING METHOD

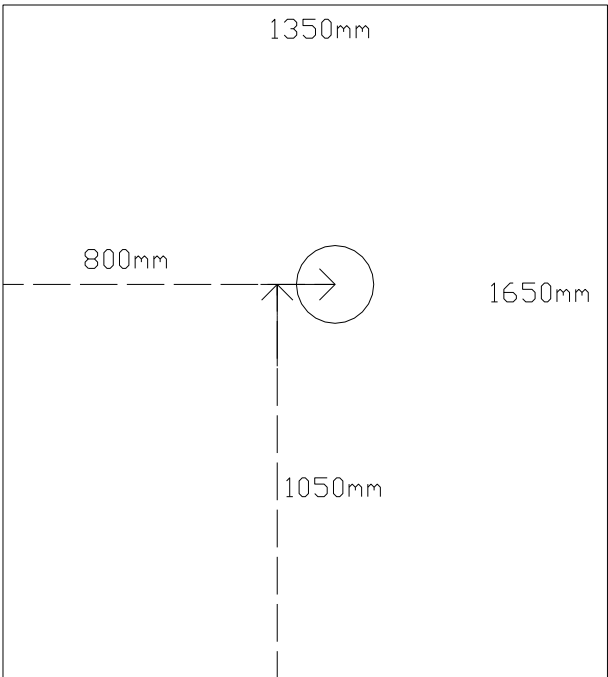
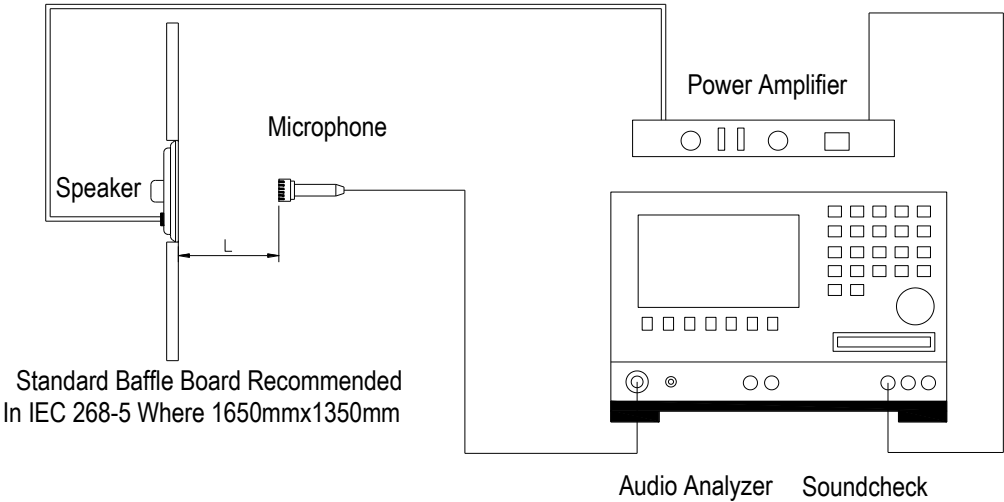


Fig. 1 Block Diagram for Measurement Method

Standard test condition of speaker



$L=50\text{cm}$

Fig. 2 Speaker Test Condition

PACKAGING

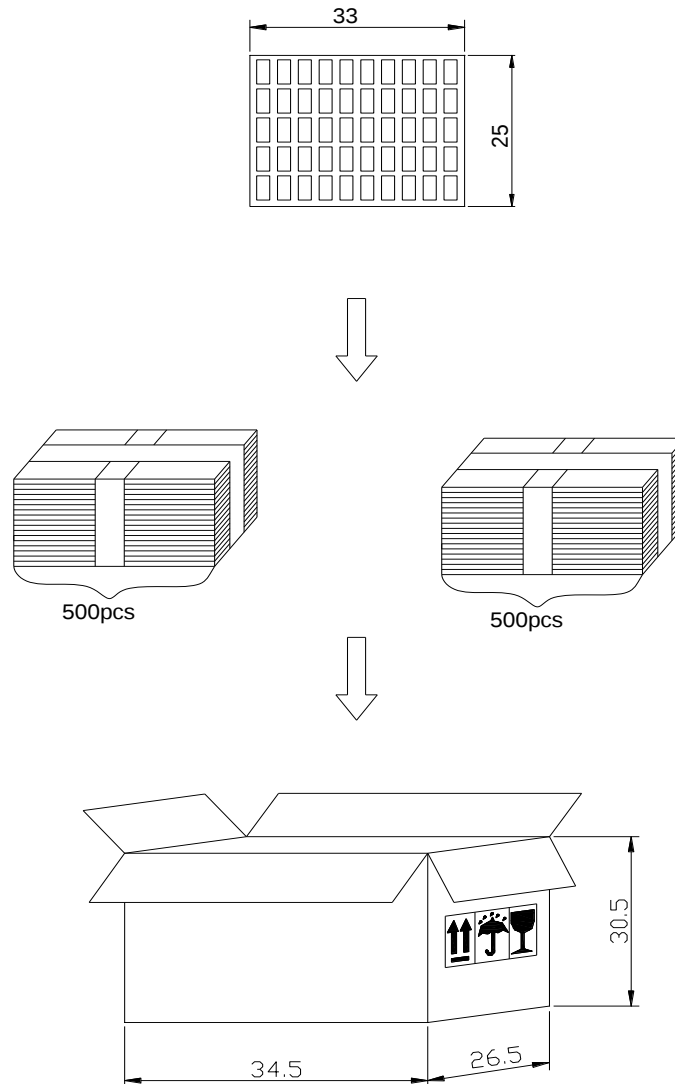
Storage conditions:

Speakers should be well packed.

The temperature should be as stable as possible and between -10°C and $+40^{\circ}\text{C}$.

The relative humidity should be below 90%.

There should be no acid or other harmful gases in the surrounding air (GB/T 9397—200X)



Remark:

50pcs per tray

10 trays for unit, 2 units per carton

Total:1000 pcs per box

Size:34.5*26.5*30.5cm