APPROVAL SHEET

Model No. : NB6027E-403S-L01RAB-00-0

Only No. : _____

Date : _____

APPROVER	CHECKER	DESIGN

Please kindly make approval of our samples, And return this form by fax or airmail, Thanks for your kind attention and co-operation.

Customer Name: _____

Customer Model No: _____

CUSTOMER APPROVAL

NAC HOLDINGS LIMITED.
Tel: 86-755-23341456 Fax: 86-755-23324031
Http://www.nacoustics.com sales@nacoustics.com

Type: Noise Cancelling Back Electret Condenser Microphone

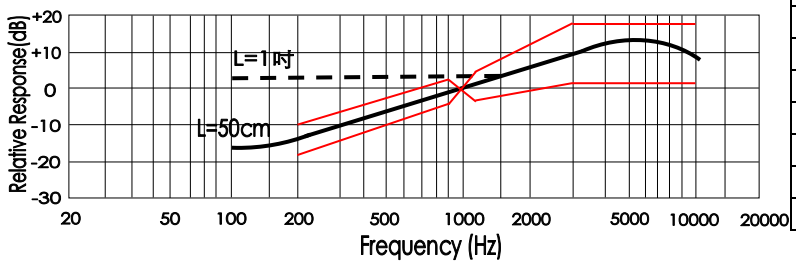
Model Number: NB6027E-403S-L01RAB-00-0

1. Electrical Characteristics （Temperature =20±2℃ Humidity=65±5%）

No	Parameter	Symbol	Condition	Limits			Unit
				Min.	Center	Max.	
1.1	Sensitivity	S	0dB=1V/Pa，at 1kHz	-43	-40	-37	dB
1.2	Output impedance	Z out	f=1kHz			2.2	KΩ
1.3	Current Consumption	I_{DSS}	V_{CC} =3.0V,R_L=2.2KΩ			500	μA
1.4	Signal to Noise Ratio	S/N	at 1kHz S.P.L=1Pa (A-Weighted Curve)	60			dB
1.5	Decreasing Voltage	ΔS	V_{CC}=3.0V to2.0V			-3	dB
1.6	Operating Voltage			1.0		10	V
1.7	Maximum input S.P.L					110	dB

2. Typical Frequency Response Curve

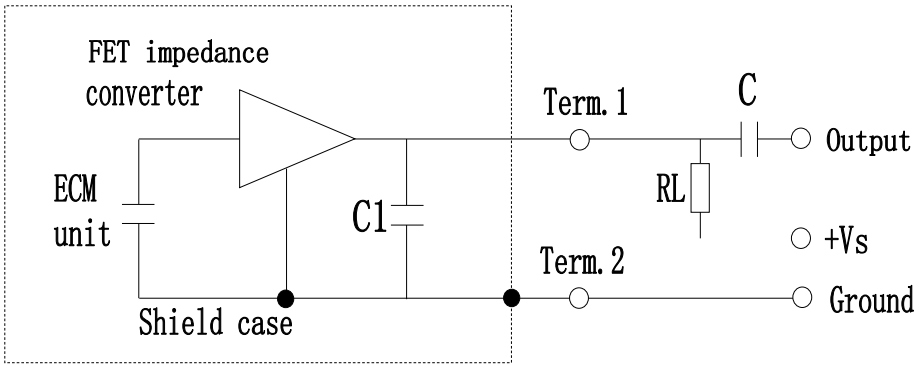
Frequency Response



Microphone Response Tolerance Window

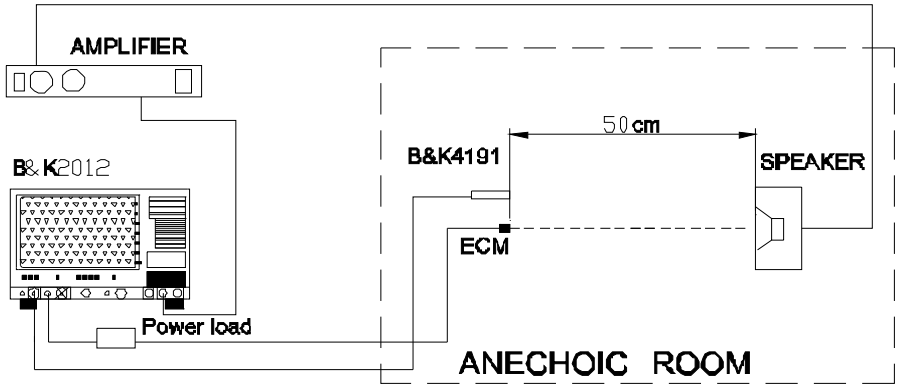
Frequency(Hz)	Lower Limit(dB)	Upper Limit(dB)
200	-18	-10
800	-6	+2
1000	0	0
1200	-4	+4
3000	+2	+18
5000	+2	+18
10000	+2	+18

3. Measurement Circuit



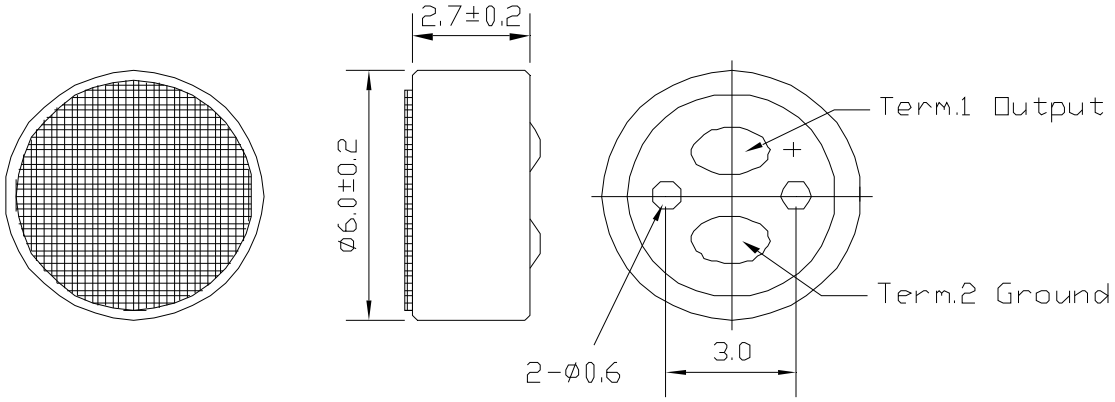
R_L=2.2KΩ
V_S =3.0V
C1＝10PF(ESD)
C=1μF

4. Measurement Setup Drawing

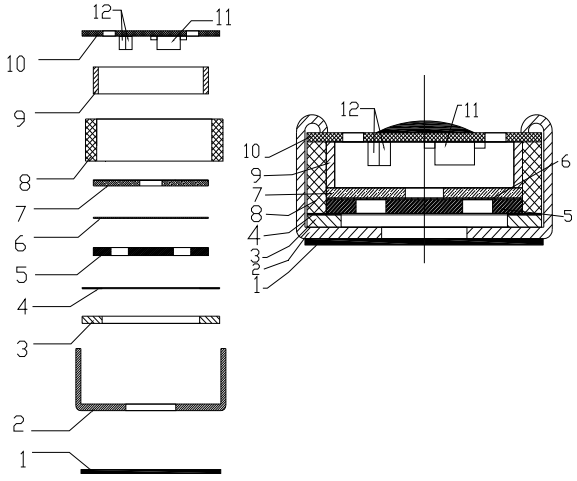


5. Appearance And Dimension

Unit：mm



6. Material And Structure



No.	Name	Material	Qty	Remark
12	Capacitance	33PF(ESD)	1	
11	FET		1	
10	P.C.B		1	Fr-4
9	Copper Ring		1	
8	Chamber		1	
7	One hole plate			
6	Damping		1	
5	Electret Plate			
4	Spacer		1	
3	Diaphragm		1	
2	Case	Al-Mg Alloy	1	
1	Dustproof Gauze		1	

7. Temperature Conditions

Storage Temperature Range	Operation Temperature Range
-40℃ ~ +85℃	-40℃ ~ +85℃

Note: Store in electronic warehouse.

8. Terminal Mechanical Strength

Terminal should be no interference in operation after pulled the terminal with 1kg for 1 minute.

9. Reliability Test

After each of following test, the sensitivity of the microphone should be within ±3dB of initial sensitivity after 3hours of conditioning at 20℃.

1. Vibration Test

Frequency : 10Hz~55Hz
Amplitude : 1.52mm
Change of Frequency : 1 octave/min
2 hours in each of axes

2. High Temperature Test

+85℃ for 240 hours.

3. Low Temperature Test

-40℃ for 240 hours.

4. Humidity Test

90%～95%RH,+60℃ for 240 hours.

5. Thermal shocking test

–40°C, 30 minutes ↔ +80°C, 30 minutes, repeated 32 cycles → room temperature, 3 hours.

6.Temperature Cycles

-40℃ ⟷ +20℃ ⟷ +85℃ ⟷ +20℃ ⟷ -40℃
(2h) (0.5h) (2h) (0.1h) (2h) (0.5h) (2h) (0.5h) (2h) for 5 cycles.

7. Packing Drop Test

Height：1.5m
Procedure: 5 times from each of axes

8. Electrostatic discharge

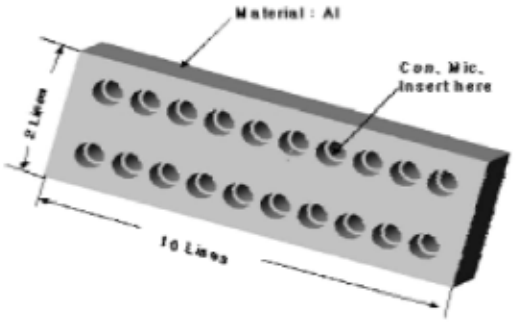
Tested to IEC61000-4-2 level 3：
a) Contact discharge
The microphone shall operate normally after 10 discharges to is 6KV DC and the discharge network is 150pF and 330Ω.
b) Air discharge
The microphone shall operate normally after 10 discharges to is 8KV DC and the discharge network is 150pF and 330Ω

10. Soldering Condition

1. We suggest using anti-static welding machine which can control soldering temperature automatically.
2. Soldering temperature should be controlled under 320℃ and soldering time for each terminal should be 1~2 sec..
3. Microphone should be fixed on the metal block (heat sink), which has high radiation effects, and heat sink shall contact with MIC tightly.
4. Microphone may easily be destroyed by the static electricity and the countermeasure for eliminating the static electricity shall be executed (worktable and human body shall be ground connection).

5. Heat Sink

Shape of heat sink



Shape of hole at fixed part