



# APPROVAL SHEET

Model No. : UB60505-352X-L01CAY-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: \_\_\_\_\_

Project Reference: \_\_\_\_\_

<b>CUSTOMER APPROVAL</b>

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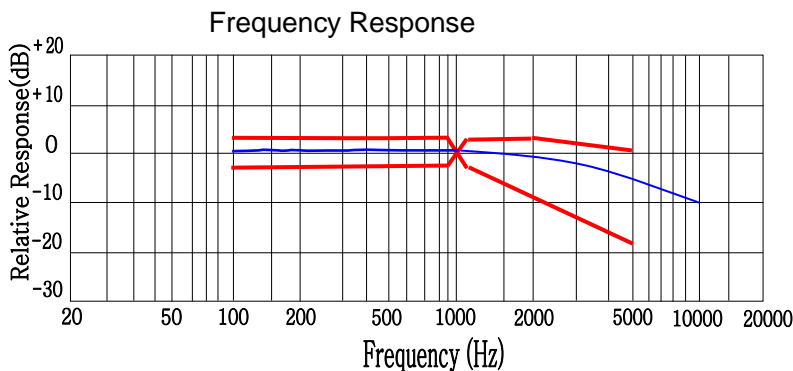
**Name:** Unidirectional Back Electret Condenser Microphone  
**Model No.:** UB60505-352X-L01CAY-00-0  
**Scope :** This specification applies back electret condenser microphone

## 1. Electrical characteristics

(Temp=20±2°C Room Humidity=65±5%)

No	Parameter	Symbol	Condition	Limits			Unit
				Min.	Center	Max.	
1.1	Sensitivity	S	0dB=1V/Pa, at 1kHz	-37	-35	-33	dB
1.2	Output impedance	Z out	f=1kHz	5			KΩ
1.3	Current Consumption	I <sub>DSS</sub>	V <sub>CC</sub> =3.0V,R <sub>L</sub> =6.1KΩ	100		150	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 <sub>CC</sub> =2.0V to 1.0V			-3	dB
1.6	Operating Voltage			1.0		10	V
1.7	Maximum input S.P.L		f=1kHz ,THD≤3%			115	dB

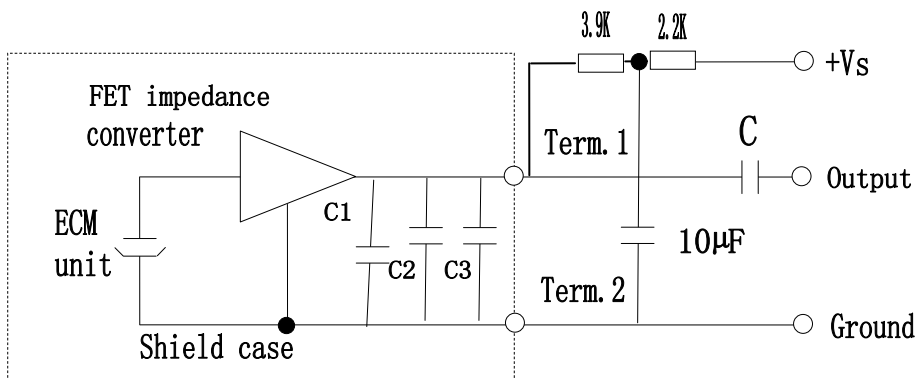
## 2. Typical Frequency Response Curve



Microphone Response Tolerance Window

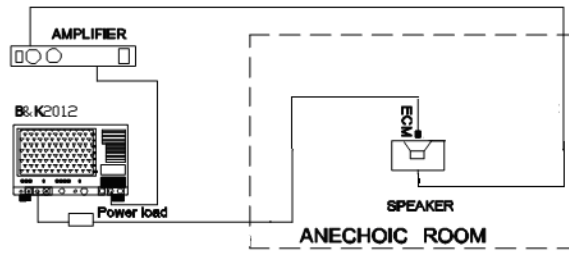
Frequency(Hz)	Lower Limit(dB)	Upper Limit(dB)
100	-3	+3
800	-3	+3
1000	0	0
2000	-8	+3
5000	-17	+0

## 3. Measurement Circuit

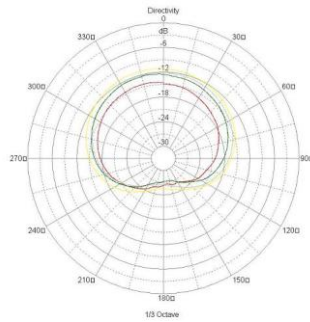


V <sub>S</sub> =3.0V
C=1μF
C1=10PF
C2=33PF
C3=100PF

## 4. Test Setup Drawing

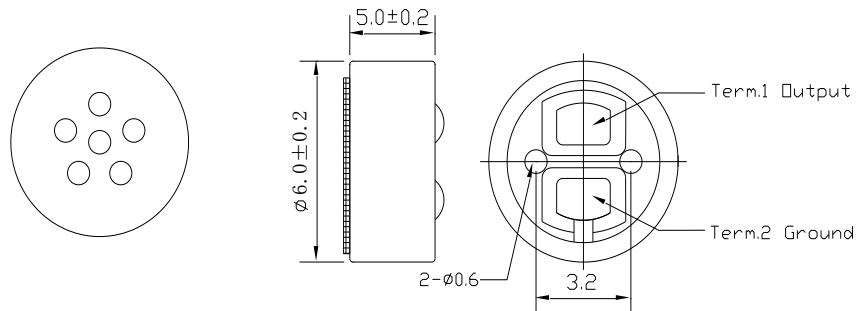


## 5. Polar Pattern

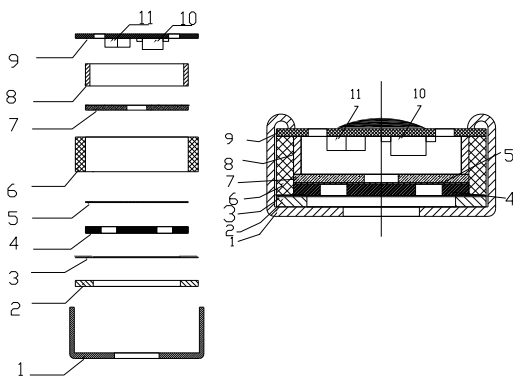


## 6. Appearance And Dimension

Unit: mm



## 7. Drawing



11	CAP	10+33+100PF	3	0201
10	IC		1	
9	P.C.B		1	FR-4
8	copper ring	Copper tube	1	
7	one bore pole blank	Copper blank	1	
6	HOUSPING CHAMBER	Gather formaldehyde	1	
5	Damping net	Metal wire	1	
4	ELECTRET BACK	Copper blank	1	
3	SPACER	mylar	1	
2	POLARIZED DIAPHRAGM	DUPONT	1	
1.	CASE	Al-Mg alloy	1	
No.	Name	material	QTY	Remark

## 8. Temperature Conditions

Storage Temperature Range	Operation Temperature Range
-40°C ~ +75°C	-20°C ~ +60°C

## 9. Terminal Mechanical Strength

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

## 10. Reliability Test

After any following tests, the sensitivity of the microphone to be within  $\pm 3\text{dB}$  of initial sensitivity after 3hours of conditioning at 20°C.

### 10.1 Vibration

Frequency1 : 10Hz~55Hz  
 Amplitude : 1.52mm  
 Change of Frequency : 1 octave/min  
 2 hours in each of 3 axes

### 10.2 Dry Heat / Cold

+85°C / -40°C for 240 hours

### 10.3 Damp Heat

90%~95%RH,+ 70°C for 240 hours

### 10.4 Temperature Shock Test

After exposure at -40°C for 30 minutes, at+80°C for 30 minutes(change time 20 seconds), 32 cycles,

### 10.5 Packing Drop Test

Height: 1.5m  
 Procedure: 5 times from each of 3 axis's

### 10.6 Static Electricity Discharge(ESD)

Charge voltage: 10 KV( DC).  
 Distance: 10~20m/m between microphone body and probe.  
 Procedure: Front and back of microphone body 10 times separately.  
 ESD capability: Contact +-6KV and Air +-8KV.

## 11.Soldering Condition

11.1 we use anti-static welding machine which can control soldering temperature automatically.

11.2 Soldering temperature should be controlled under 320°C.

11.3 MIC shall be fixed on the metal block (heat sink), which has high radiation effects , and heat sink shall contact with MIC tightly.

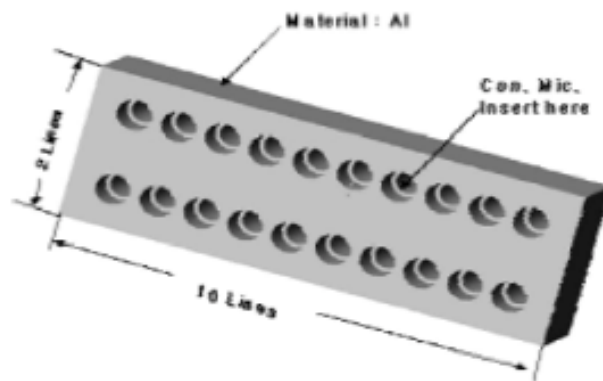
11.4 Soldering time for each terminal shall be 1~2 sec.

11.5 Soldering pinhole shall be avoided.

11.6 MIC 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).

## 11.7 Heat Sink

Shape of heat sink



Shape of hole at fixed part

