



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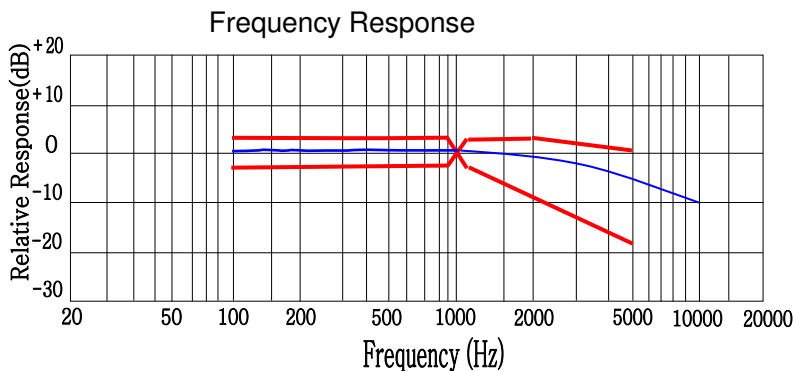
**Name:** Unidirectional Back Electret Condenser Microphone  
**Model No.:** UB60505-352X-L01CAY-00-0  
**Scope :** This specification applies back electret condenser microphone

## 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

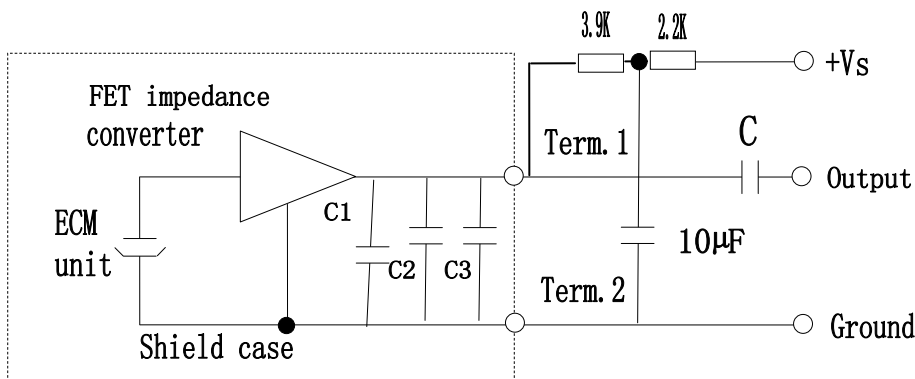
## 2. Typical Frequency Response Curve



Microphone Response Tolerance Window

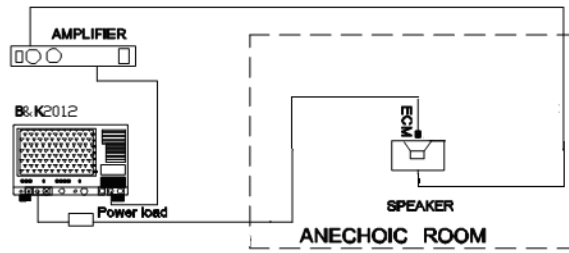
Frequency(Hz)	Lower Limit(dB)	Upper Limit(dB)
100	-3	+3
800	-3	+3
1000	0	0
2000	-8	+3
5000	-17	+0

## 3. Measurement Circuit

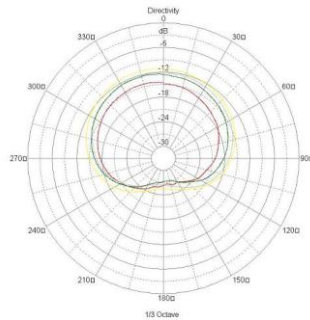


V <sub>S</sub> =3.0V
C=1μF
C1=10PF
C2=33PF
C3=100PF

## 4. Test Setup Drawing

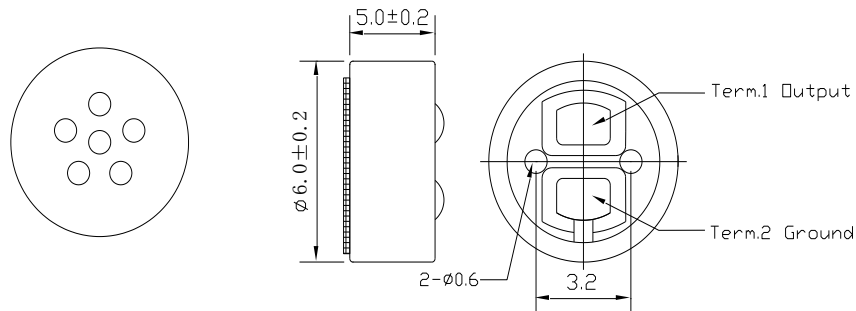


## 5. Polar Pattern

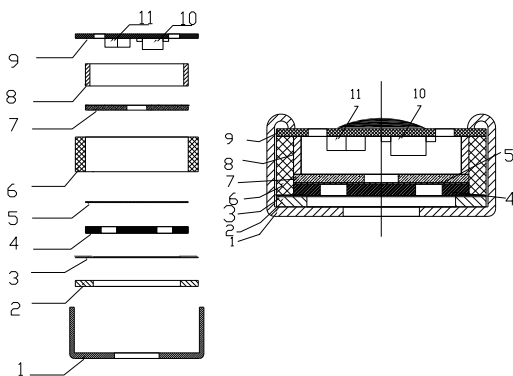


## 6. Appearance And Dimension

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)

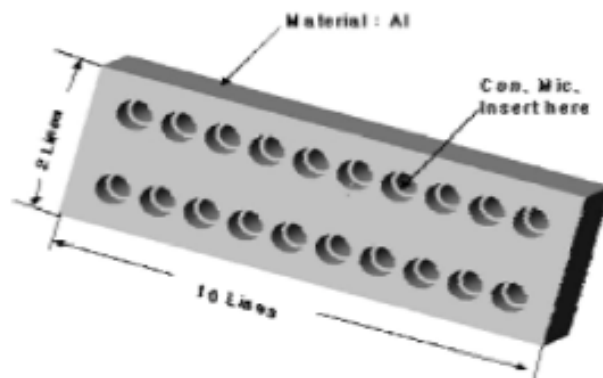
Charge voltage: 10 KV( DC).  
 Distance: 10~20m/m between microphone body and probe.  
 Procedure: Front and back of microphone body 10 times separately.  
 ESD capability: Contact +6KV and Air +-8KV.

## 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

