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**CUSTOMER:**

## APPROVAL SHEET

PRODUCT NAME	PART NUMBER	DIMENSION	REMARK
Electret Condenser Microphone	EM3015S-47-G	φ3.0×1.5(mm)	D.S.PCB

APPROVED BY	CHECKED BY	ISSUED BY

**APPROVED BY**

**DATE:**

PART NUMBER: EM3015S-47-G

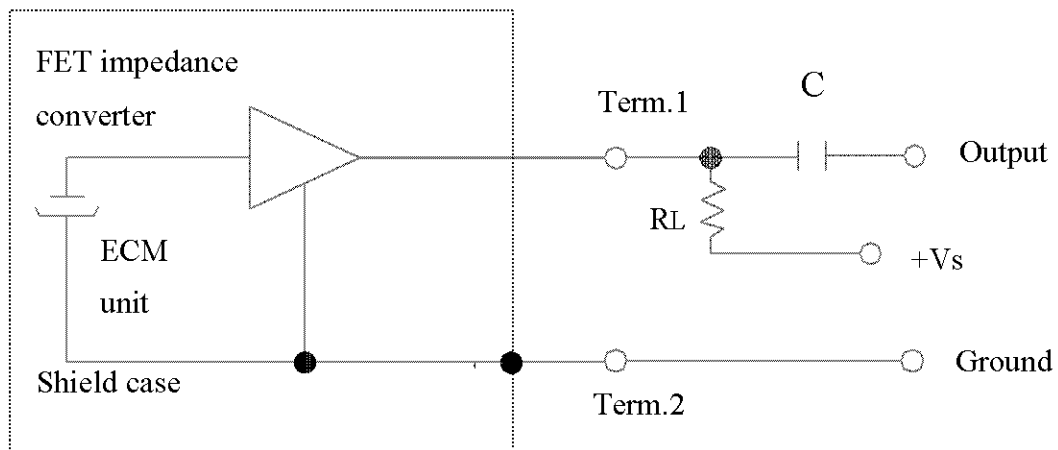
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## SPECIFICATION

Item	Symbol	Test conditions	Min	Standard	Max	Unit
Sensitivity	S	f=1KHz.Pin=1Pa	-50	-47	-44	dB 0dB=1V/Pa
Directivity	Omnidirectional					
Impedance	Zout				2.2	KΩ
Input sound Pressure level	S.P.L				100	dB
Operation voltage	Vs	-	1.0	2.0	10	V
Current consumption	I	f=1KHz.Pin=1Pa			500	uA
Sensitivity reduction	ΔS	f=1KHz.Pin=1Pa Vs=2.0→1.5V			-3	dB
S/N ratio	S/N(A)	f=1KHz.Pin=1Pa A=curve	54			dB

**Measurement Circuit( Test Condition Vs=2.0V RL=2.2KΩ  
Ta=20°C R.H=65% )**



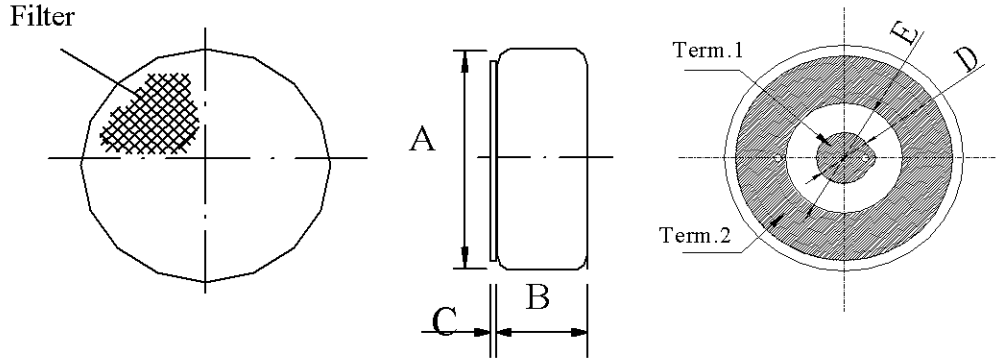
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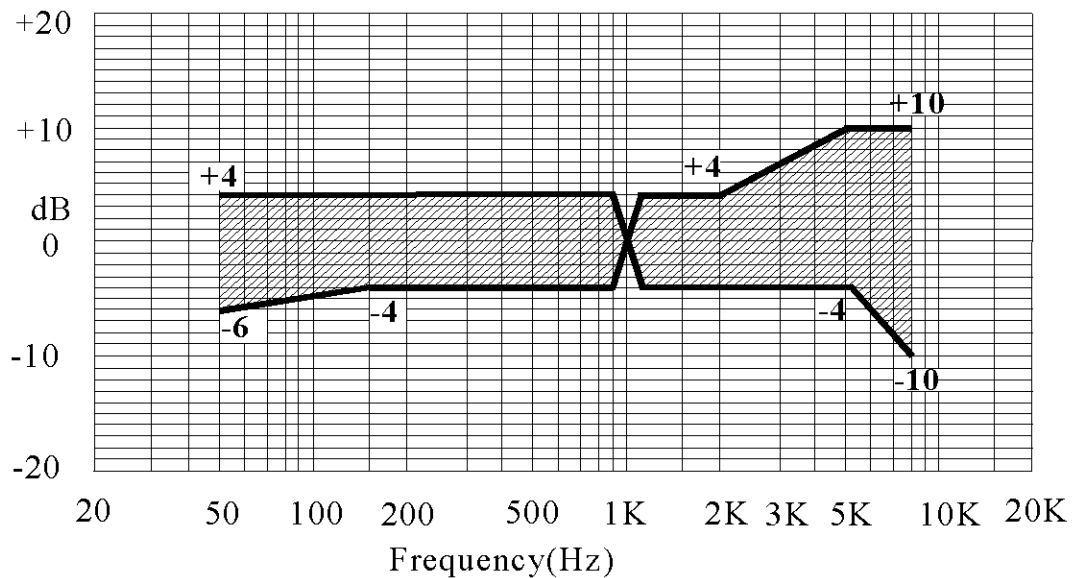
## Dimensional Drawing

unit: mm



PART	MIN	STANDARD	MAX	REMARK
A	φ2.8	φ3.0	φ3.2	
B	1.35	1.5	1.65	
C	-	-	0.2	
D	φ0.6	φ0.8	φ1.0	
E	φ1.2	φ1.4	φ1.6	

## Typical Frequency Response Curve



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## Ambient condition

### (1) Operating condition

Ambient temperature:  $-10^{\circ}\text{C} \sim +45^{\circ}\text{C}$

Relative humidity:  $\leq 85\%$

### (2) Storage condition

Ambient temperature:  $-20^{\circ}\text{C} \sim +60^{\circ}\text{C}$

Relative humidity:  $45\% \sim 75\%$

## Reliability Test

### 1) Vibration Test

To be no interference in operation after vibration of full amplitude 2mm for 30 minutes at three axis, the sensitivity to be within  $\pm 3\text{dB}$  from initial sensitivity.

### 2) Drop Test

To be no interference in operation after dropped to concrete floor each time from 1meter height of five directions in state of packing, the sensitivity to be within  $\pm 3\text{dB}$  from initial sensitivity.

### 3) High Temperature Test

To be no interference in operation after high temperature test  $70 \pm 3^{\circ}\text{C}$  for 48 hours. The sensitivity to be within  $\pm 3\text{dB}$  from initial sensitivity.

### 4) Isotherm & Iso-humidity Test

To be no interference in operation after storage test at temperature  $60 \pm 2^{\circ}\text{C}$  and relative humidity ( $93 \pm 3\%$ ) for 48 hours. The sensitivity to be within  $\pm 3\text{dB}$  from initial sensitivity. The test is performed at temperature  $20^{\circ}\text{C}$  after operation for 6 hours.

### 5) Low Temperature Test

To be no interference in operation after high temperature test  $-20 \pm 3^{\circ}\text{C}$  for 48 hours, the sensitivity to be within  $\pm 3\text{dB}$  from initial sensitivity.

### 6) Temperature Cycle Test

After exposure at  $+55 \pm 2^{\circ}\text{C}$  for 1 hour, at  $20 \pm 2^{\circ}\text{C}$  for 1 hour, at  $-10 \pm 2^{\circ}\text{C}$  for 1 hour, at  $20 \pm 2^{\circ}\text{C}$  for 1 hour, with 5 cycles. Change of sensitivity within  $\pm 3\text{dB}$  from initial measuring should be done after 2 hours exposed to  $20 \pm 2^{\circ}\text{C}$ .