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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

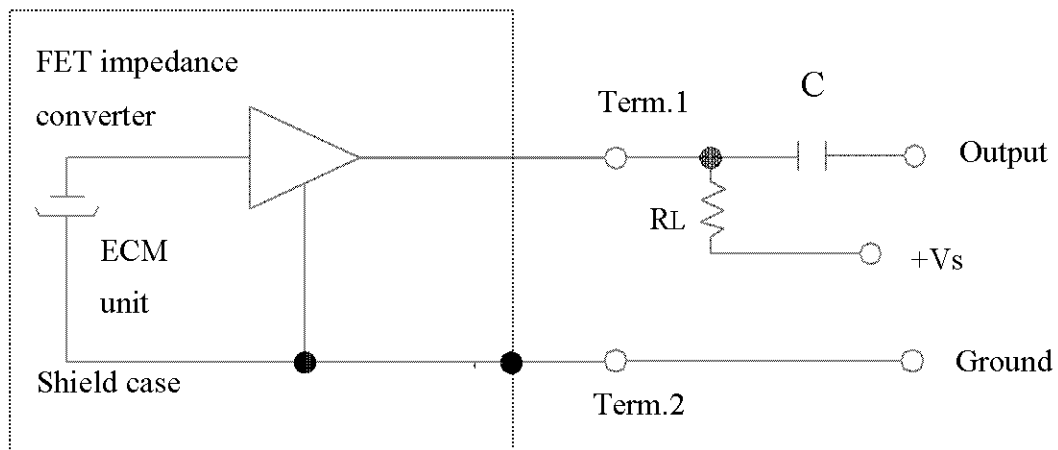
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SPECIFICATION

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%)**



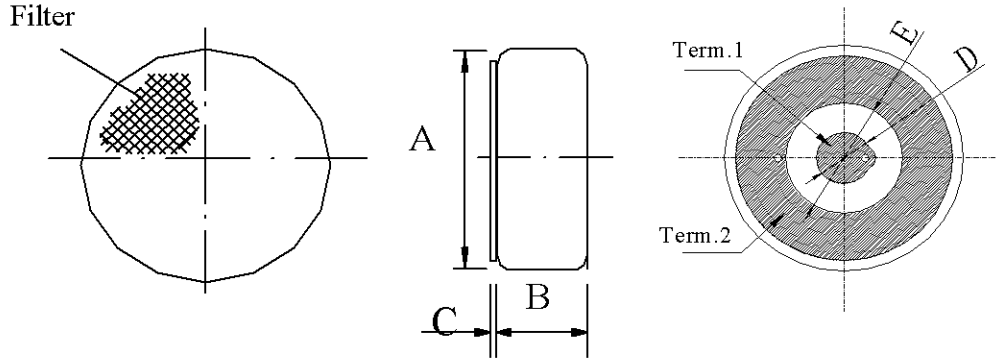
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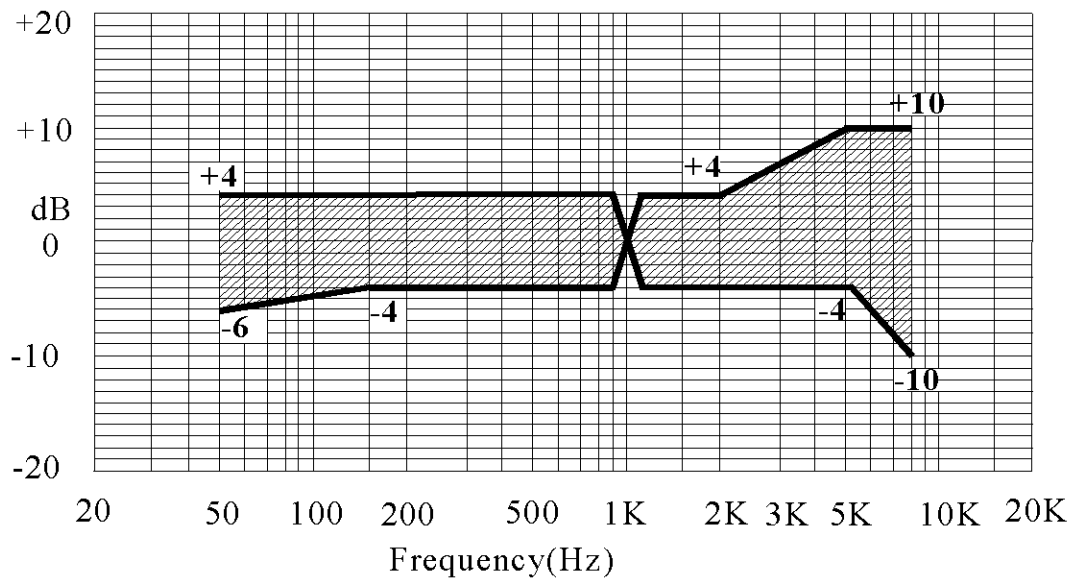
Dimensional Drawing

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°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 $20\pm 2^{\circ}\text{C}$.