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HOME PAGE: www.globalsources.com/hornmic.co

**CUSTOMER: Digi-Key Corporation**

**APPROVE SHEET**

PRODUCT NAME	TYPE	DIMENSION	
Electret Condenser Microphone	EM6050P-42	Ø6.0×5.0(mm)	pin type

APPROVED :

李 華

DATE: 2000.11.25

CHECKED BY:

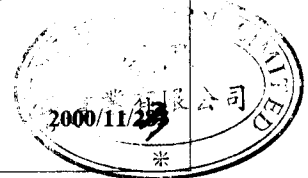
陳 為 波

DATE: 2000.11.25

ISSUED BY:

陳 為 波

DATE:



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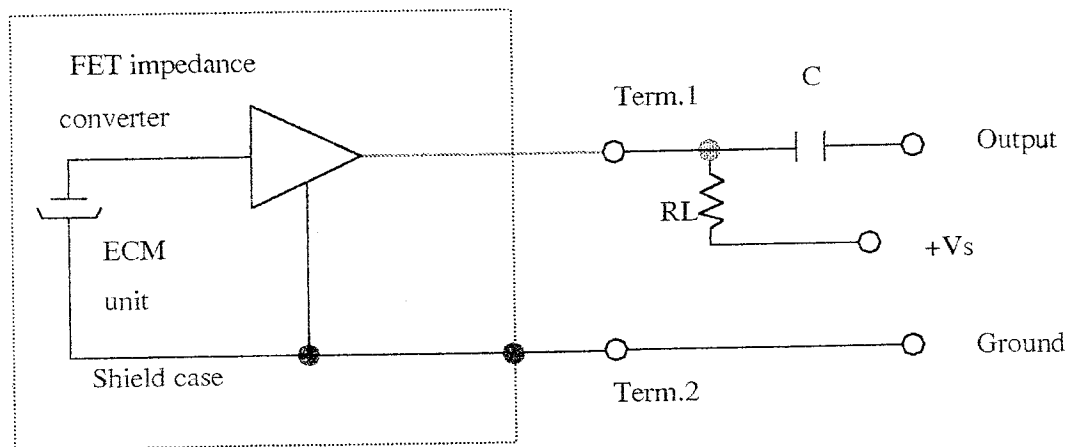
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## SPECIFICATION

Item	Symbol	Test conditions	Min	Standard	Max	Unit
Sensitivity	S	f=1KHz. Pin=1ubar	-45	-42	-39	dB <small>0dB=1V/Pa</small>
Directivity	Omnidirectional					
Impedance	Zout				2.2	KΩ
Current consumption	I	f=1KHz. Pin=1ubar			500	uA
Sensitivity reduction	ΔS	f=1KHz. Pin=1ubar. Vs=4.5→1.5V			-3	dB
S/N ratio	S/N(A)	f=1KHz. Pin=1ubar. A=curve	40			dB

### Measurement Circuit (Test Condition Vs=4.5V RL=2.2KΩ

Ta=20°C R.H=65%)

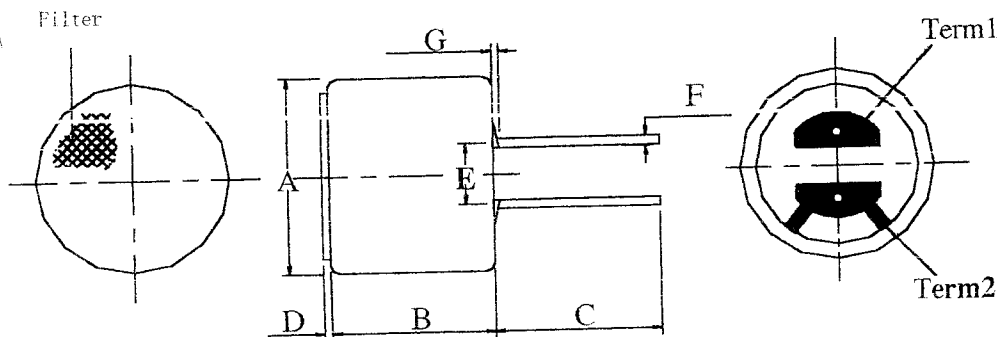


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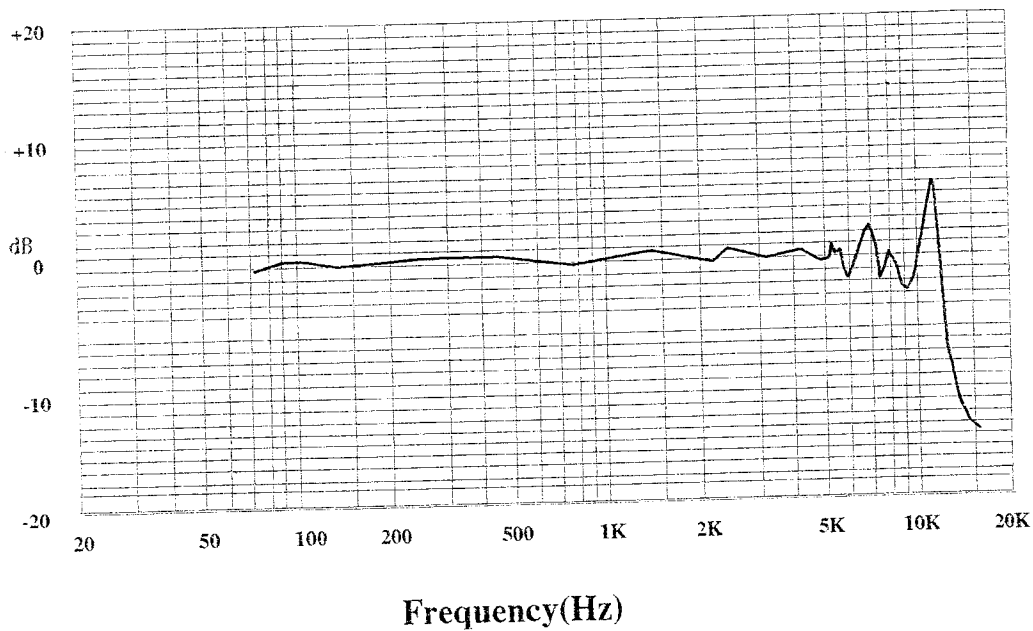
## Dimensional Drawing

unit: mm



PART	MIN	TYPE	MAX	REMARK
A	Ø5.8	Ø6.0	Ø6.2	
B	4.8	5.0	5.2	
C	4	5	6	
D	-	-	0.2	
E	1.8	1.9	2	
F	-	-	0.7	
G	-	-	0.5	

## 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%

## 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 1 meter height of three directions in state of packing, the sensitivity to be within  $\pm 3\text{dB}$  from initial sensitivity.

### 3) High Temperature Storage:

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

### 4) Isotherm & Iso-humidity Storage

To be no interference in operation after storage test at temperature  $40^{\circ}\text{C} \pm 2^{\circ}\text{C}$  and relative humidity ( $93\% \pm 2 \sim 3\%$ ) 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 2 hours.

### 5) Low Temperature Storage

To be no interference in operation after test at temperature  $-20^{\circ}\text{C} \pm 3^{\circ}\text{C}$  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  $20^{\circ}\text{C} \pm 2^{\circ}\text{C}$ .

### 7) Collision Test

After collided with the acceleration  $100 \pm 10\text{m/s}$ , at the vertical & horizontal directions for  $1000 \pm 10$  times. at the state of packing. Change of sensitivity within  $\pm 3\text{dB}$  from initial.