

Address:  
BLOCK 1, DEHUINA INDUSTRIAL DISTRICT,  
MINGZHI RD LONGHUA, SHENZHEN,  
GUANGDONG, CHINA 518131

TEL: (86) 755-8192552 8190943  
FAX: (86) 755-8192557  
E-mail: szwwiner@public.szptt.net.cn  
HOME PAGE: www.globalsources.com/hornmic.co

**CUSTOMER: Digi-Key Corporation**

**APPROVE SHEET**

| PRODUCT NAME                        | TYPE       | DIMENSION    |  |
|-------------------------------------|------------|--------------|--|
| Electret<br>Condenser<br>Microphone | EM6050U-51 | Ø6.0×5.0(mm) |  |

APPROVED :

李 華

DATE: 2000.11.15

CHECKED BY:

陳 小 波

DATE: 2000.11.25

ISSUED BY:

陳 為 波

DATE: 2000/11/23



**APPROVED BY:**

**DATE:**

Address:  
BLOCK 1, DEHUINA INDUSTRIAL DISTRICT,  
MINGZHI RD LONGHUA, SHENZHEN,  
GUANGDONG, CHINA 518131

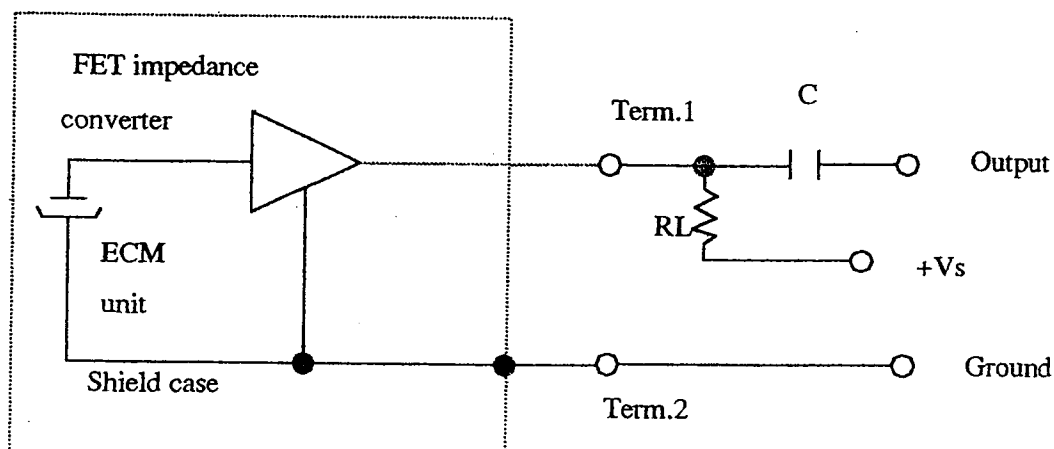
TEL: (86) 755-8192552 8190943  
FAX: (86) 755-8192557  
E-mail: szwwiner @ public.szptt.net.cn  
HOME PAGE: www.globalsources.com/hornmic.co

## SPECIFICATION

| Item                  | Symbol     | Test conditions                                   | Min | Standard | Max | Unit                                                  |
|-----------------------|------------|---------------------------------------------------|-----|----------|-----|-------------------------------------------------------|
| Sensitivity           | S          | f=1KHz. Pin=1pa                                   | -55 | -51      | -47 | $\frac{\text{dB}}{\text{0dB}=1\text{V/}\mu\text{pa}}$ |
| Directivity           |            | Unidirectional                                    |     |          |     |                                                       |
| Impedance             | Zout       |                                                   |     |          | 2.2 | $\Omega$                                              |
| Current consumption   | I          | f=1KHz. Pin=1pa                                   |     |          | 500 | $\mu\text{A}$                                         |
| Sensitivity reduction | $\Delta S$ | f=1KHz. Pin=1pa.<br>$V_s=2 \rightarrow 1\text{V}$ |     |          | -3  | dB                                                    |
| S/N ratio             | S/N(A)     | f=1KHz. Pin=1pa.<br>A=curve                       | 58  |          |     | dB                                                    |

### Measurement Circuit (Test Condition $V_s=2\text{V}$ $R_L=2.2\text{K}\Omega$ )

$T_a=20^\circ\text{C}$  R.H=65%)



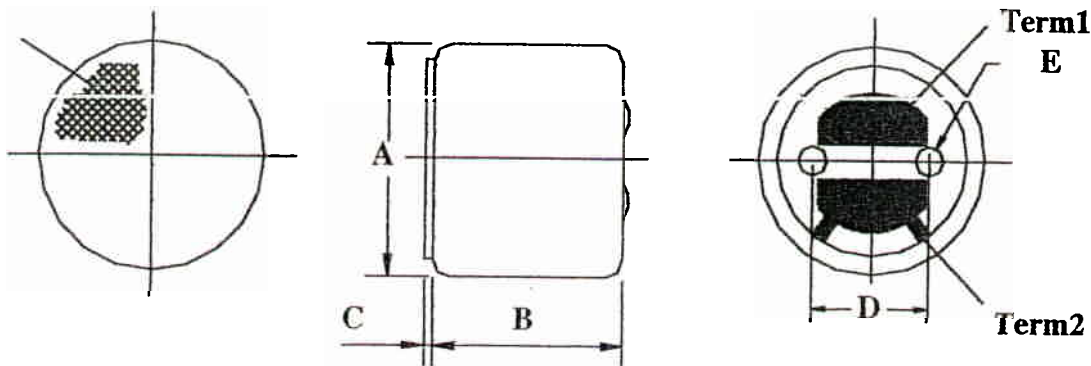
Address:  
BLOCK 1, DEHUINA INDUSTRIAL DISTRICT,  
MINGZHI RD LONGHUA, SHENZHEN,  
GUANGDONG, CHINA 518131

TEL: (86) 755-8192552 8190943  
FAX: (86) 755-8192557  
E-mail: szwwiner @ public.szptt.net.cn  
HOME PAGE: www.globalsources.com/hornmic.co

## Dimensional Drawing

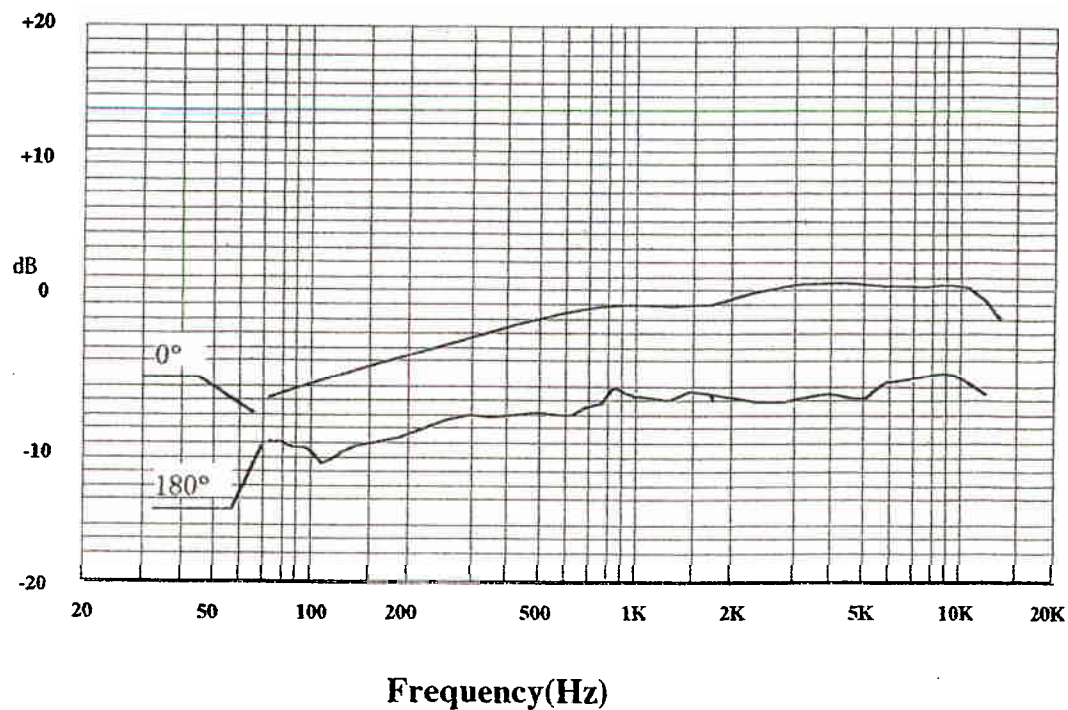
unit: mm

Filter



| PART | MIN  | TYPE | MAX  | REMARK |
|------|------|------|------|--------|
| A    | Ø5.8 | Ø6.0 | Ø6.2 |        |
| B    | 4.8  | 5.0  | 5.2  |        |
| C    | -    | -    | 0.2  |        |
| D    | 2.8  | 3    | 3.2  |        |
| E    | 0.6  | 0.7  | 0.8  |        |

## Typical Frequency Response Curve



Address:  
BLOCK 1, DEHUINA INDUSTRIAL DISTRICT,  
MINGZHI RD LONGHUA, SHENZHEN,  
GUANGDONG, CHINA 518131

TEL: (86) 755-8192552 8190943  
FAX: (86) 755-8192557  
E-mail: szwwiner @ public.szptt.net.cn  
HOME PAGE: www.globalsources.com/hornmic.co

## 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  $-40^{\circ}\text{C} \pm 3^{\circ}\text{C}$  for 4 hours, the sensitivity to be within  $\pm 3\text{dB}$  from initial sensitivity.

### 6) Temperature Cycle Test

After exposure at  $55^{\circ}\text{C} \pm 2^{\circ}\text{C}$  for 30 minutes, at  $20^{\circ}\text{C} \pm 2^{\circ}\text{C}$  for 10 minutes. at  $85^{\circ}\text{C} \pm 2^{\circ}\text{C}$  for 30 minutes, at  $20^{\circ}\text{C} \pm 2^{\circ}\text{C}$  for 10 minutes, with 5 cycles. Change of sensitivity within  $\pm 3\text{dB}$  from initial measuring should be done after 2 hours exposed to  $20^{\circ}\text{C} \pm 2^{\circ}\text{C}$ .

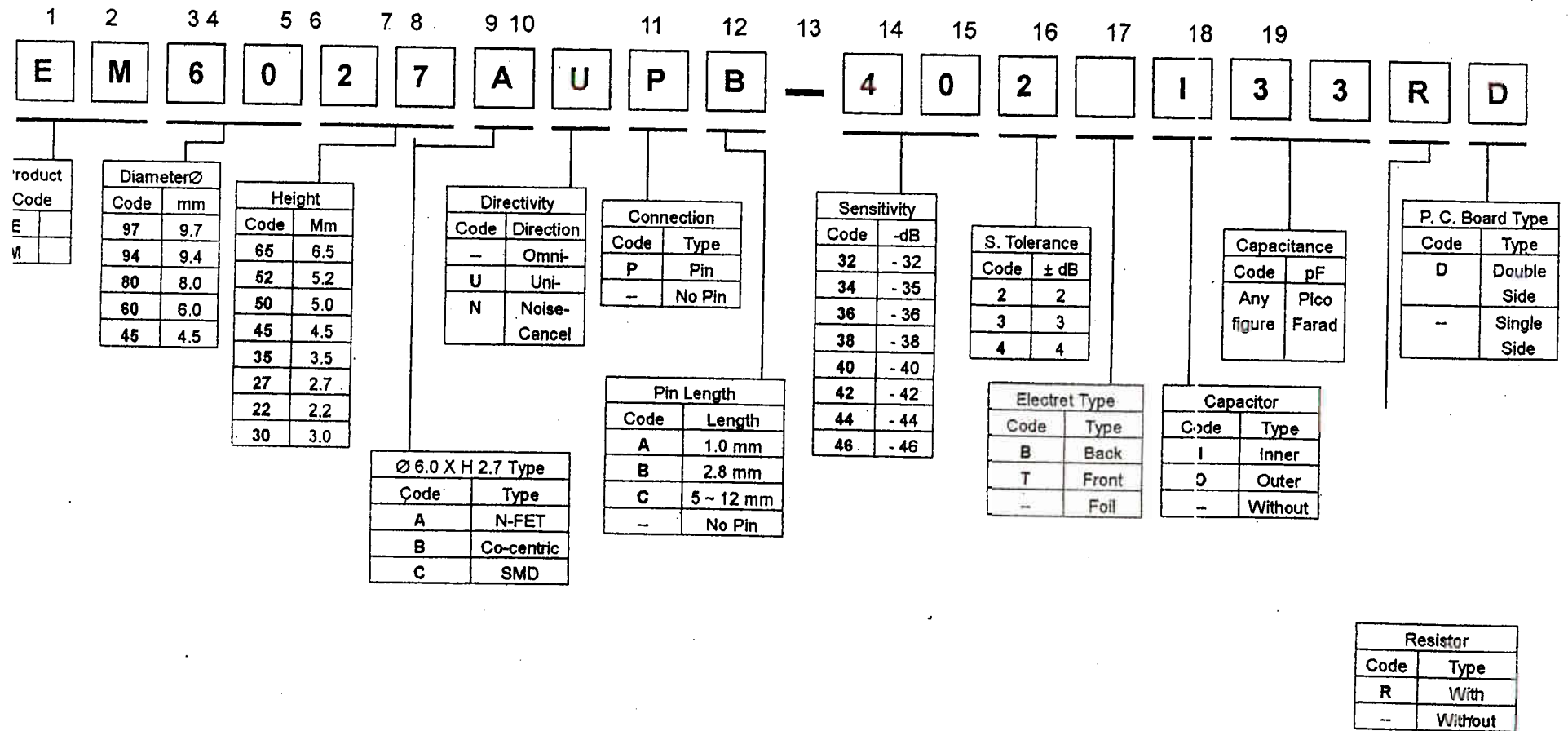
### 7) Collision Test

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.

# HORN Shenzhen Horn Industrial Co., Ltd.

## Explanation of Part Number

### Explanation of Part Number



# SHENZHEN HORN INDUSTRIAL CO.,LTD.

## PACKING LIST OF CONDENSER MICROPHONES

| MODEL NO | DIMENSION<br>(mm) | DIRECTIVITY      | INNER PACKING<br>(PCS) | MIDDLE PACKING<br>(PCS) | CARTOON<br>(PCS) | GROSS WEIGHT<br>(Kg) | NET WEIGHT<br>(Kg) |
|----------|-------------------|------------------|------------------------|-------------------------|------------------|----------------------|--------------------|
| EM9765   | 9.7*6.5           | Omni directional | 100                    | 1,000                   | 10,000           | 10                   | 9.5                |
| M9765P   | 9.7*6.5           | Omni directional | N/G                    | 400                     | 4,000            | 5                    | 4.5                |
| M9752U   | 9.7*5.2           | Unidirectional   | 100                    | 1,000                   | 10,000           | 9.5                  | 9                  |
| N9752N   | 9.7*5.2           | Noise Cancelling | 100                    | 1,000                   | 10,000           | 9.5                  | 9                  |
| EM9745   | 9.7*4.5           | Omni directional | 100                    | 1,000                   | 10,000           | 9                    | 8.5                |
| M9745P   | 9.7*4.5           | Omni directional | N/G                    | 400                     | 4,000            | 3.5                  | 3                  |
| EM9465   | 9.4*6.5           | Omni directional | 100                    | 1,000                   | 10,000           | 9.5                  | 9                  |
| M9465P   | 9.4*6.5           | Omni directional | N/G                    | 400                     | 4,000            | 4.5                  | 4                  |
| M8050U   | 8.0*5.0           | Unidirectional   | 50                     | 1,000                   | 15,000           | 10                   | 9.5                |
| M6050    | 6.0*5.0           | Omni directional | 100                    | 2,000                   | 30,000           | 10.5                 | 10                 |
| M6050P   | 6.0*5.0           | Omni directional | 100                    | 1,000                   | 10,000           | 3.5                  | 3                  |
| M6050U   | 6.0*5.0           | Unidirectional   | 100                    | 2,000                   | 30,000           | 10.5                 | 10                 |
| M6050N   | 6.0*5.0           | Noise Cancelling | 100                    | 2,000                   | 30,000           | 10.5                 | 10                 |
| M6035    | 6.0*3.5           | Omni directional | 100                    | 2,000                   | 30,000           | 9.5                  | 9                  |
| M6027    | 6.0*2.7           | Omni directional | 100                    | 2,000                   | 30,000           | 7.5                  | 7                  |
| M6027PA  | 6.0*2.7           | Omni directional | 100                    | 2,000                   | 30,000           | 7.5                  | 7                  |
| M4530    | 4.5*3.0           | Omni directional | 100                    | 2,000                   | 30,000           | 6.5                  | 6                  |