## APPROVAL SHEET (承認書)

Product: Electret Condenser Microphone(駐機體電容式傳聲器)

| Model          | OFM6027P 双电容 |
|----------------|--------------|
| Customer name  |              |
| Sensitivity    | -43±2dB      |
| Test Condition | 4.5V 2.2KΩ   |

| DESIGNED BY     |  |
|-----------------|--|
| REVISED BY      |  |
| APPROVED BY     |  |
| SUBMISSION DATE |  |

#### **CUSTOMER:**

P/N of Customer:

| APPROVED BY | APPROVED DATE |
|-------------|---------------|
|             |               |

## Electret Condenser Microphone Specification

### 1. Electrical Characteristics:

| Item                                    | Symbol    | Test Conditions                     | Minimum | Standard | Maximum | Unit |
|---|-----------|-------------------------------------|---------|----------|---------|------|
| Sensitivity                             | S         | Pin=1 Pa ,<br>f=1kHz                | -45     | -43      | -41     | dB   |
| Output<br>Impedance                     | Zout      | Low Impedance                       |         |          |         |      |
| Directivity                             |           | Unidirectional                      |         |          |         |      |
| Current<br>consumption                  | Ι         |                                     |         |          | 500     | μA   |
| S/N ratio (A)                           | S/N (A)   | Pin=1 Pa ,<br>f=1kHz(A Curve)       | 56      |          |         | dB   |
| Decreasing<br>Voltage<br>Characteristic | ΔS        | Pin=1 Pa ,<br>f=1kHz<br>Vs=2.0~1.5V |         |          | -3      | dB   |
| Operating<br>Voltage                    |           | DC                                  | 1.5     | 4.5      | 10      | V    |
| Charging Type                           | Diaphragr | n                                   |         |          |         |      |

### Test Condition (Vs=4.5V RL=2.2KΩ Ta=20°C R.H.=70%)

### 2, Frequency Response Curve:



| Frequency(Hz)   | 100 | 200 | 900 | 1000 | 1200 | 2000 | 4000 | 5000 | 8000 |
|-----------------|-----|-----|-----|------|------|------|------|------|------|
| Upper Limit(dB) | 3   | 3   | 3   | 0    | 3    | 5    | 6    | 6    | 6    |
| Lower Limit(dB) | -3  | -3  | -3  | 0    | -3   | -3   | -3   | -3   | -5   |

4. Standard test circuit:





### **5** Mechanical Characteristics

| Dimension             | See appearance drawing                         |
|-----------------------|--|
| Weight                | Less than 1.0g                                 |
| Operation Temperature | $-30^{\circ}\text{C}$ to $+70^{\circ}\text{C}$ |
| Storage Temperature   | $-40^{\circ}\text{C}$ to $+85^{\circ}\text{C}$ |

## 6. Appearance Drawing (Unit:mm)



# 7. Reliability Tests

| Vibration Test | Vibration cycle of 10 to 50 Hz/min, for 2 hours, full Amplitude           |
|----------------|---|
|                | 1.52mm, in 3directions.   |
|                | The sensitivity change within $\pm 3$ dB relative to initial value.       |
| Drop Test      | To be no interference in operation after drop from 1.5 Meter height       |
|                | onto aconcrete surface, each time at three direction in state of          |
|                | packing, The sensitivity  |
|                | change within $\pm 3$ dB relative to initial value.                       |
| Operating Life | Subject samples to $+70^{\circ}$ C for 1000 hours under full rated power. |
|                |   |

## 7. Reliability Tests

| High             | The Microphone exposure at 70 $^{\circ}C$ for 200 hours, then                     |
|------------------|---|
| Temperature Test | measuring thesensitivity after depositing 2 hours of conditioning                 |
|                  | at room temperature.  |
|                  | The sensitivity change within $\pm 3$ dB relative to initial value.               |
| Low Temperature  | The Microphone exposure at -30 $^{\circ}$ C for 200 hours, then                   |
| Test             | measuring thesensitivity after depositing 2 hours of conditioning                 |
|                  | at room temperature.  |
|                  | The sensitivity change within $\pm 3$ dB relative to initial value.               |
| Static           | Condition part at $+25^{\circ}$ C for 1 hour. Then expose to $+70^{\circ}$ C with |
| Humidity         | 95% relativehumidity for 240 hours. Finally allow to dry at room                  |
|                  | ambient for 4 hours beforetaking final measurements, The                          |

|             | sensitivity change within $\pm 3$ dB relative to initial value.                        |
|-------------|--|
| Temperature | 32 cycles of the following:  |
| Shock       | 30 minutes at -40 $^\circ \rm C$ followed by 30 minutes at 85 $^\circ \rm C$ with a 20 |
|             | second maximum transition time between temperature extremes,                           |
|             | The sensitivity change within $\pm 3$ dB relative to initial value. 32                 |
|             | cycles of the following:30 minutes at $-40^{\circ}$ C followed by 30                   |

# 7. Reliability Tests

|   | minutes at 85 $^{\circ}$ C with a 20 second maximum transition time |
|---|---|
|   | between temperature extremes, The sensitivity change within $\pm$   |
|   | 3dB relative to initial value.                                      |
| Lead Pull Test  | Subject test leads to an increasing pull force (between the wire or |
| (If   | lead and thetransducer) until destruction occurs. Record the point  |
| applicable)   | of destruction. Theminimum pull strength is 1Kg (2.2 pounds).       |
|   |   |
| Solder Heat   | Flux the terminations using a RMA solder flux ,then manually        |
| Resistance  | immerse theterminations into a $260\pm5$ °C solder pot containing   |
| $(\mathbf{T}_{1}^{0}, \dots, 1^{n}, \dots, 1^{n}, 1^{n})$ |   |
| (If applicable)   | 63/37 solder for 10 to 11 seconds.                                  |

# 8. Material

