

# SPECIFICATION

Customer : QUARTZ-1

Applied To :

Product Name : MIC

Part No : KPCM-97H45P-56dB

Drawing No. : KF3.002.526.56

Signature of Approval

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Signature of KEPO

Approved by	Checked by	Issued by	Date



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## 1. Scope

This specification is applied to the MIC which is used all of the electrical acoustic product.

-- applications: mobile phone, PDA, notebook computer, etc.

## 2. General

2.1 Out-Diameter : Ø9.7mm

2.2 Height : 4.5mm

2.3 Weight : 1gr.

2.4 Operating Temperature range:

-10~+60℃ without loss of function

2.5 Store Temperature range:

-40~+70℃ without loss of function

## 3. Electrical and Acoustic Characteristics

Test condition : 15 ~ 35 ℃, 35% ~ 85% RH, 860~1060 mbar

NO.	Items	Specifications
1	Rated Voltage	3V
2	Operating Voltage	1V~10V
3	Sensitivity	-56± 3dB(0dB=1V/bar,1KHz)
4	Current Consumption	0.5mA Max
5	Frequency	100~16,000Hz
6	S/N Ratio	≥60dB
7	Sensitivity Reduction	within-3dB at 1.5V
8	Directivity	Omnidirectional
9	Testing Condition	1000Hz, Vs=4.5V, RL=2.2K Ω
10	Shell Material/Color	AL/Silver
Note:		

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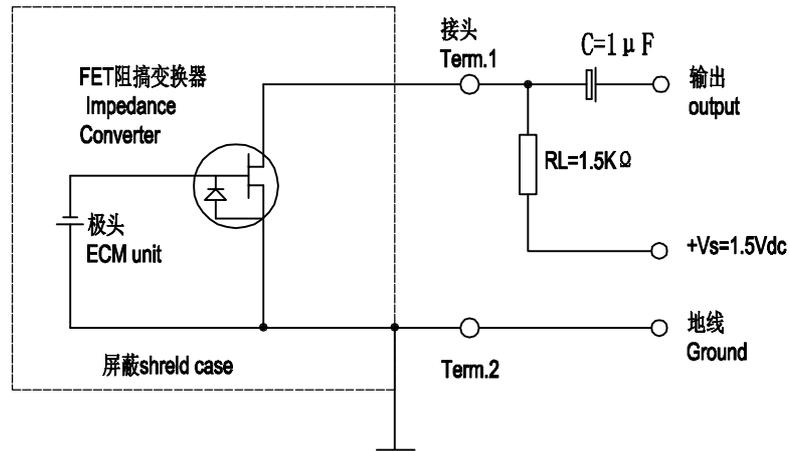
## 4. Reliability Test

After test (1-5items), MIC being placed in 20 °C for 3 hours, the sensitivity should be within  $\pm 3\text{dB}$  from initial sensitivity .

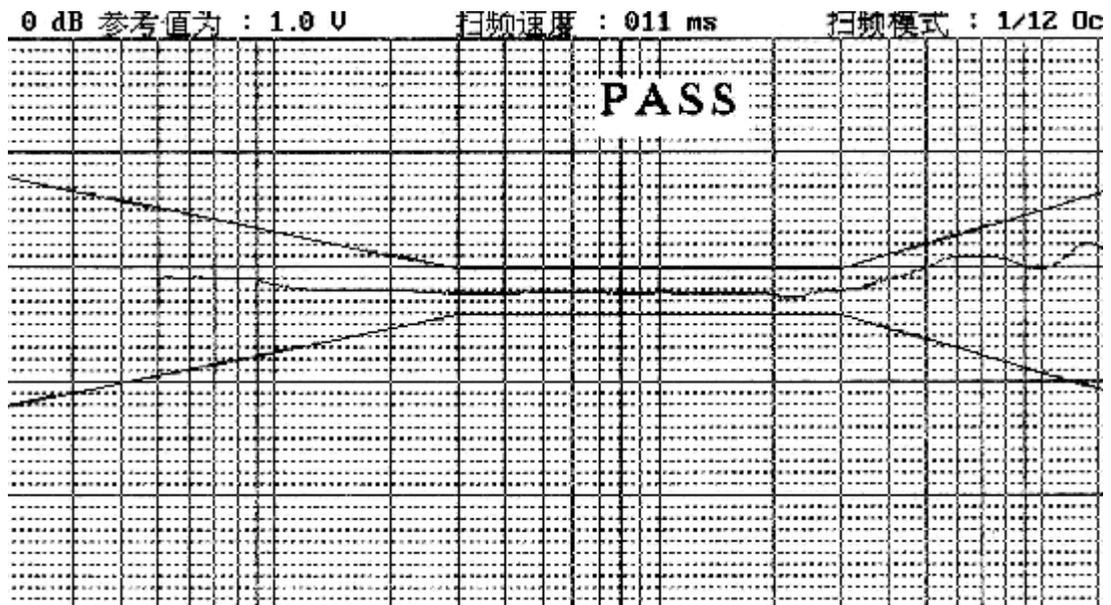
	Item	Specification
1	Vibration test	Frequency1 : 10Hz~55Hz Amplitude : $\pm 0.15\text{mm}$ Frequency2 : 55Hz~150Hz Acceleration : 20m/s Change of Frequency : 1 octave/min, each 2 hrs in 3 axes
2	Shocks test	Pulse wave Shape : Half sine wave Pulse Duration : 11ms Acceleration: 150m/s <sup>2</sup> Number of shock : each 10 times in 3 axes
3	High/Low temperature test	70 °C for 72hrs , -20 °C for 72hrs
4	Damp Heat test	90%RH,+40 °C for 120hrs
5	Temperature Cycles test	-20 °C $\leftrightarrow$ 25 °C $\leftrightarrow$ 70 °C 10cycles (2h)(1h)(2h)(1h)(2h) 10cycles

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**5.Measurement Circuit** (Test Condition  $V_s=4.5V$   $R_L=2.2K\ \Omega$   
 $T_a=20^\circ C$  R.H=65%)

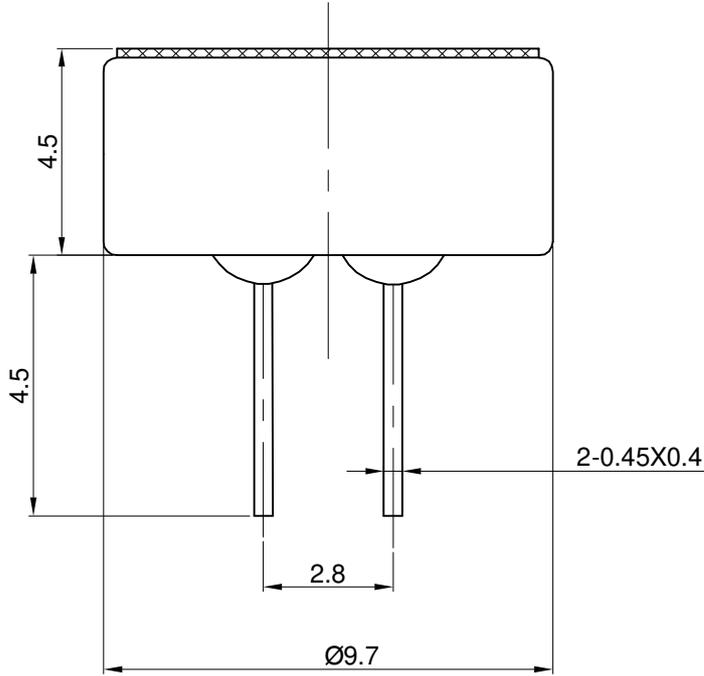
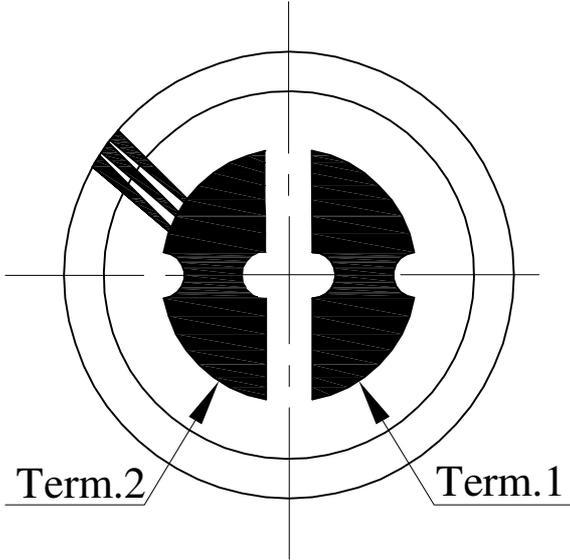


**Typical Frequency Response Curve**



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### 6. Dimensions



FIRST ANGLE PROJECTION



UNIT : mm  
Tolerance :  $\pm 0.2$

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## 7. Cautions

7.1 Please use the diminutive electric iron less than 20W for the soldering type microphone .

7.2 The temperature of the working surface shall be under 270°C during soldering process.

7.3 E.C.M shall be fixed on the device with well Radiation during soldering process.

7.4 The soldering time for each terminal shall be within 1~2 sec.

7.5 The soldering point should not appear any pinholes after soldering.

7.6 E.C.M may easily be destroyed by the static electricity, so some measures against the static electricity shall be adopted ( soldering instrument , worktable , body of operator should be grounded)