

# SPECIFICATION

Customer : QUARTZ-1

Applied To :

Product Name : MIC

Part No : KPCM-29B

Drawing No. : KF3.002.471.56

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 : 0.8gr.
- 2.4 Operating Temperature range:  
-25~+55°C without loss of function
- 2.5 Store Temperature range:  
-25~+55°C without loss of function

## 3. Electrical and Acoustic Characteristics

Test condition : 15 ~ 35 °C , 25% ~ 85% RH, 860~1060 mbar

NO.	Items	Specifications
1	Rated Voltage	4.5V
2	Operating Voltage	1.5V~10V
3	Sensitivity	-56 ± 2dB at 1KHz(0dB=1V/ μ bar)
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

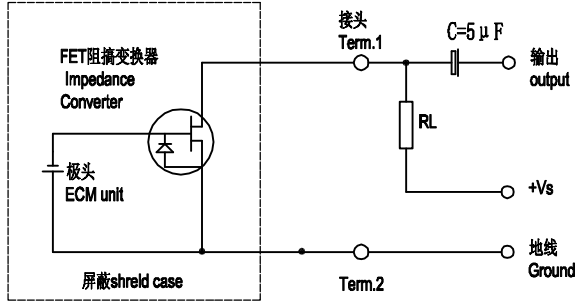
After test (1-5items), MIC being placed in 20°C for 3 hours, the sensitivity should be within  $\pm 3\text{dB}$  from initial sensitivity .

	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

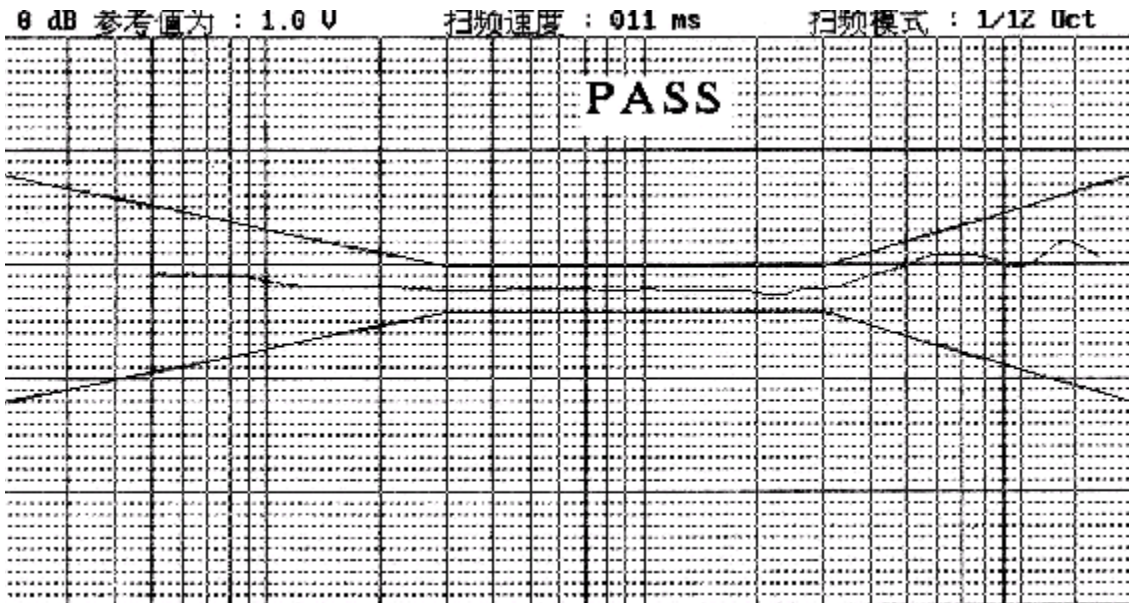
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**5.Measurement Circuit** (Test Condition  $V_s=4.5V$   $R_L=2.2K \Omega$   
 $T_a=20^\circ C$  R.H=65%)

原理图

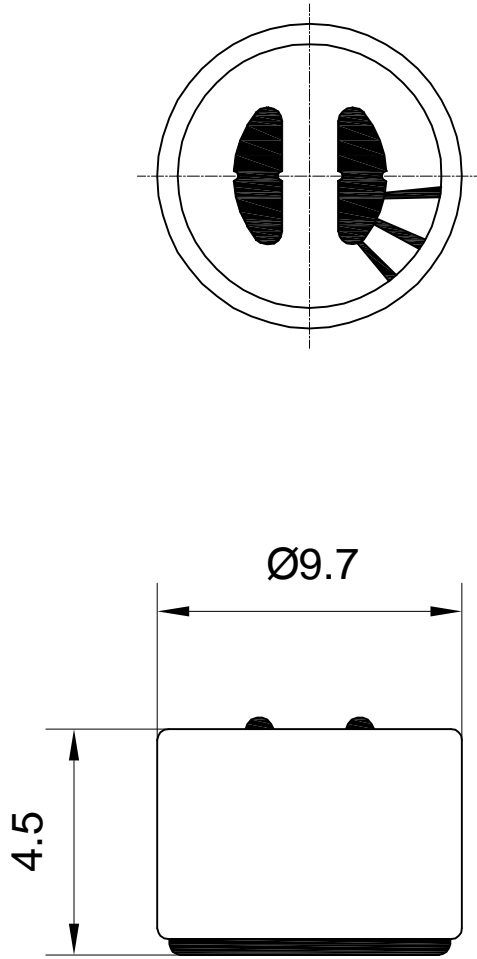


Typical Frequency Response Curve

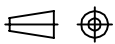


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## 6. Dimensions



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)