SPECIFICATION

Customer：

Applied To：

Product Name：MIC

Model Name：KPCM-E0415B1033-6030

Drawing No.：KPMIC.841.428

Compliance with RoHS

Signature of Approval

Signature of KEPO

Approved by	Checked by	Issued by	Date

CONTENTS

1. Scope

Scope: The specification describes the requirements of a omni-directional condenser microphone for use in cellular phone、PDA、NB etc.

2. General

2-1、Dimension : ∅4 ×1.5 mm
2-2、Weight : Less than 0.10 g
2-3、Soldering heat shock : After soldering heat shock at 260±5°C for 3±1 seconds. The microphone should be without damage.
2-4、Terminal strength :After applied a 1 Kg force on terminal for 1 minute. The microphone should be without damage.
2-5、Operating temperature range : -20 °C~ 60 °C
2-6、Storage temperature range : -30 °C~ 70 °C

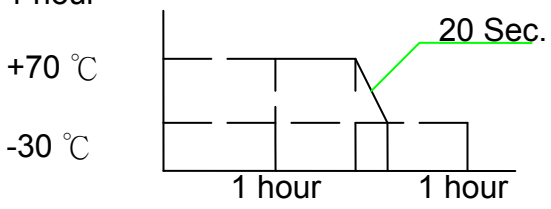
3.Electrical and Acoustic Characteristics.

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

	Items	Specification
1	Rated Voltage	2.0 V
2	Operating Voltage	1.1V~10V
3	Sensitivity	-60±3dB,0dB=1V/μbar(-40±3dB, 0dB=1V/Pa)
4	Power consumption	Less than 500 μA
5	Output impedance	Less than 2.2KΩ
6	S/N Ratio	More than 60dB
7	Max. input sound level	115 dB SPL
8	Directivity	Omni-directional
9	Voltage reduction characteristic	Less than 3dB from 2V to 1.1V
10		

4. Reliability Test

After test(1~7item), the MIC sensitivity to be within +/-3dB from initial sensitivity.

	Item	Specification
1	High Temperature Test	After being placed in a chamber with +70± 3 ℃ for 48hours and then being placed in natural condition for 1 hour
2	Low Temperature Test	After being placed in a chamber with -20± 3 ℃ for 48 hours and then being placed in natural condition for 1 hour
3	Humidity Test	To be no interference in operation after storage test at temperature 60+/-2℃ and relative humidity (93±3%) for 48 hours. the sensitivity to be within +/-3dB from initial sensitivity. the test is performed at temperature 20 ℃ after operation for 6 hours.
4	Thermal Shock Test	After being placed in a chamber at +55 ℃ for 1 hour, then receiver shall be placed in a chamber at -10 ℃ for 1 hour(1 cycle is the below diagram). After 5above cycles, receiver shall be measured after being placed in natural condition for 1 hour. To be no interference in operation after storage test at temperature 60+/-2℃ and relative humidity (93±3%) for 48 hours. the sensitivity to be within +/-3dB from initial sensitivity. the test is performed at temperature 20 ℃ after operation for 6 hours. After being placed in a chamber with -20± 3 ℃ for 48 hours and then being placed in natural condition for 1 hour After being placed in a chamber with +70± 3 ℃ for 48hours and then being placed in natural condition for 1 hour 

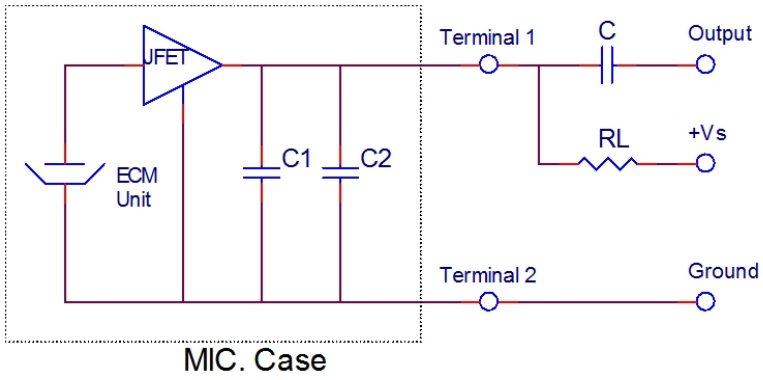
4. Reliability Test

5	Vibration Test	To be no interference in operation after vibration of full amplitude 2mm for 30minutes at five axis
6	Drop Test	To be no interference in operation after dropped to concrete floor each time from 1 meter height of five directions in state of packing
7	Collision Test	After collided with the acceleration 100+/-10m/s, at the vertical & horizontal directions for 1000+/-10 times, at the state of packing. Change of sensitivity within +/-3dB from initial.

5. Measurement Circuit

(Test Condition Rl=2.2KΩ Ta=20℃ R.H=65%)

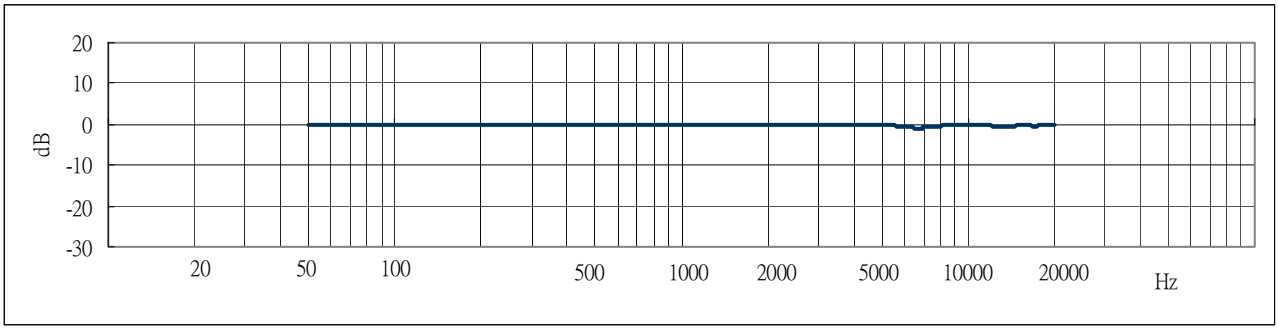
Operating voltage range : 2.0V~10V



RL=2.2kΩ
Vs=2.0V

C1=10pF
C2=33pF
D1=TVS Diodes

Frequency response:



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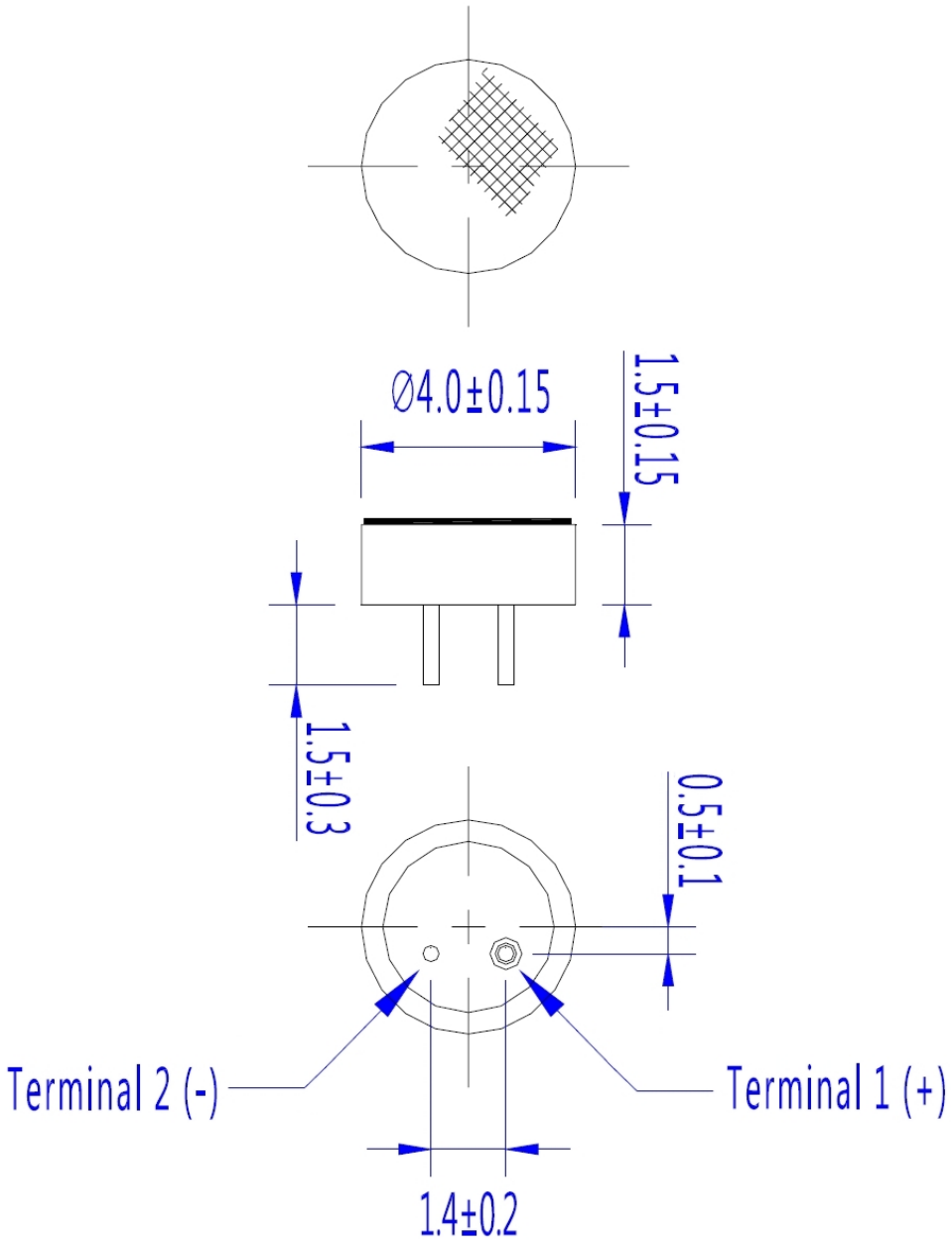
7. Dimensions



FIRST ANGLE PROJECTION

UNIT : mm
Tolerance : ±0.2

8. Revision

Rev. No.	DATE	PAGE	DESCRIPTION	SIGN
1.0	2007.03.12	/	primary	