LJ DEVICE CO., LTD.

力 臻 股 份 有 限 公 司
LJ DEVICE CO., LTD.

零 件 規 格 書/承 認 書
SPECIFICATION FOR APPROVAL

CUSTOMER : _____

DESCRIPTION : Electret Condenser Microphone

MODEL : B6022AL423-03

CUSTOMER PART NO : _____

APPROVED SIGNATURES

Rev	Date	Description	Designed	Checked	Approved
A	2008/3/26	Release		Kevin	

臺北市北投區吉利街 131 號 2 樓
2F, NO. 131, JILI ST., PEITOU, TAIPEI, TAIWAN, R.O.C.
TEL : 886-2-2827-0158 · FAX : 886-2-2827-0348

Restricted

1 Security Warning

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2 Publication history

Version	Description	Date	Author	Approved
1.0	New Design	2008.03.21	Sharon	Herbert

Contents

PRODUCT SPECIFICATIONS

Type: Electret Condenser Microphone

Number: B6022AL423-03

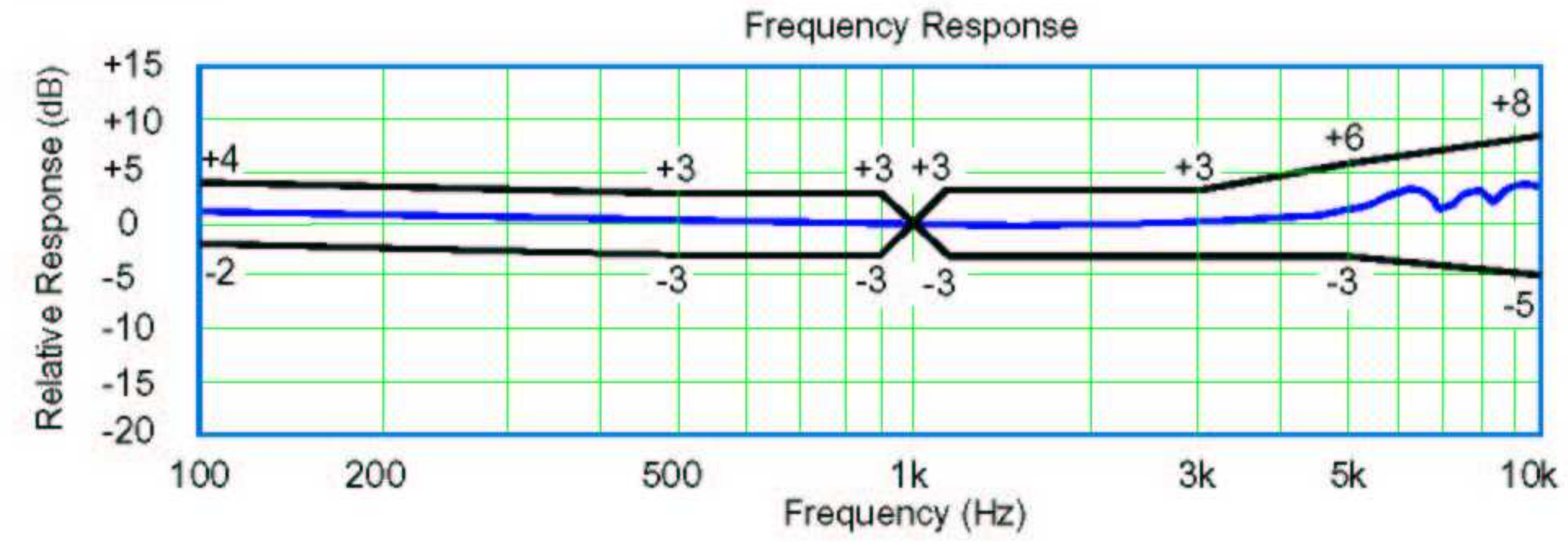
1 Test Condition (Vs=2.0V , RL=2.2kΩ, B&K 50cm)

StandardConditions (As IEC 60268-4)	Temperature	Humidity	Air pressure
Environment Conditions	+15℃～+35℃	45%RH～75%RH	86kPa～106kPa
Basic Test Conditions	+20℃±2℃	60%RH～70%RH	86kPa～106kPa

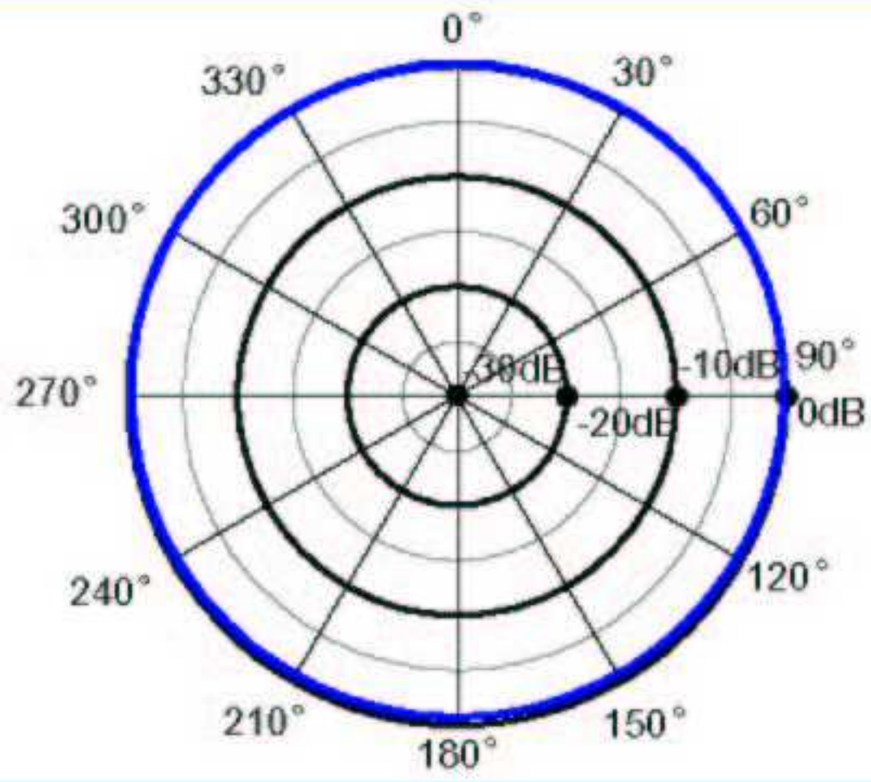
2 Electrical Characteristics

Item	Symbol	Test Conditions	Min	Standard	Max	Unit
Sensitivity	S	f=1kHz, Pin=1Pa	-45	-42	-39	dB 0dB=1V/Pa
Output Impedance	Zout	f=1kHz, Pin=1Pa			2.2k	Ω
Directivity	D(θ)	Omnidirectional				dB
Current Consumption	I				500	μA
S/N Ratio	S/N(A)	f=1kHz, Pin=1Pa A-Weighted Curve	58			dB
Decreasing Voltage Characteristic		f=1kHz, Pin=1Pa Vs=2.0 -- 1.5V			-3	dB
Operating Voltage Range	Vs		1.5		10	V
Distortion	THD	f=1kHz, Pin=104dB SPL			2	%
Max Input Sound Pressure Level	MISPL				115	dB

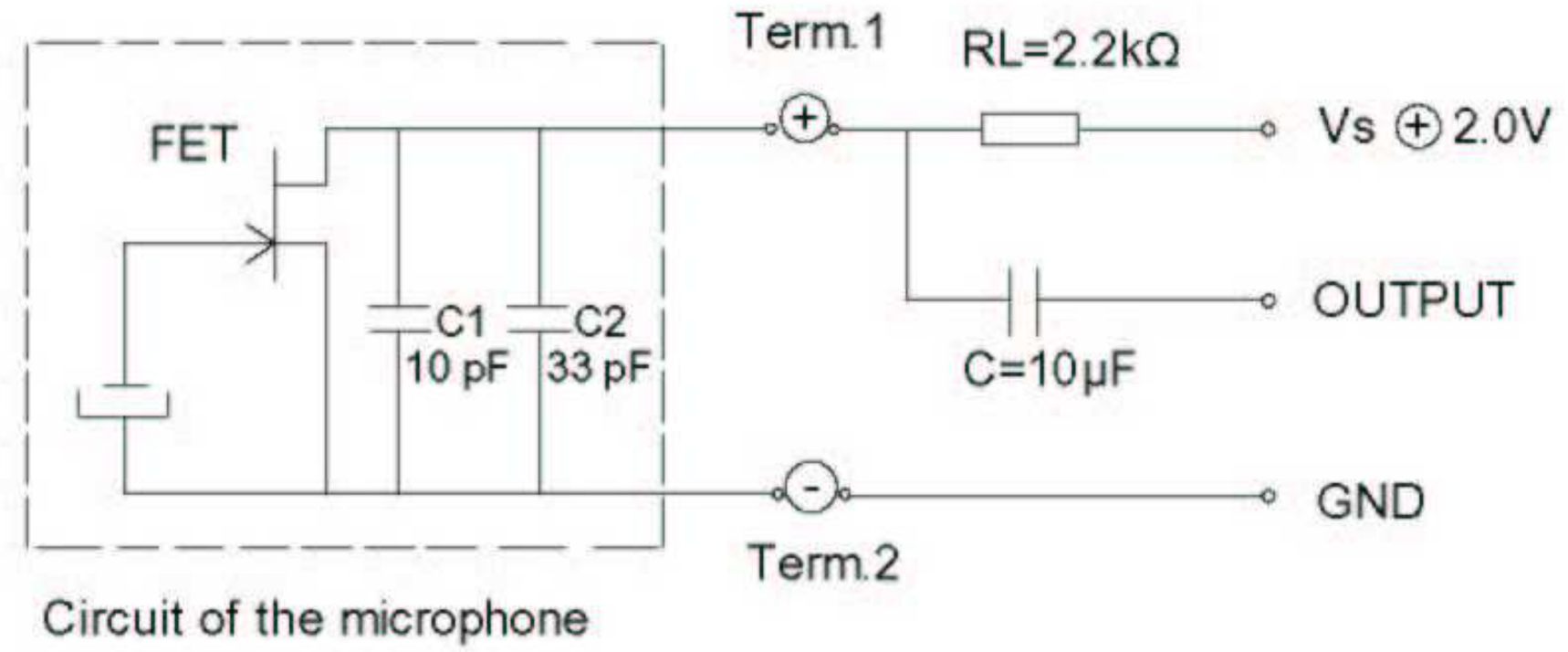
3 Frequency in Cycles Per Second &Microphone Response Tolerance Window



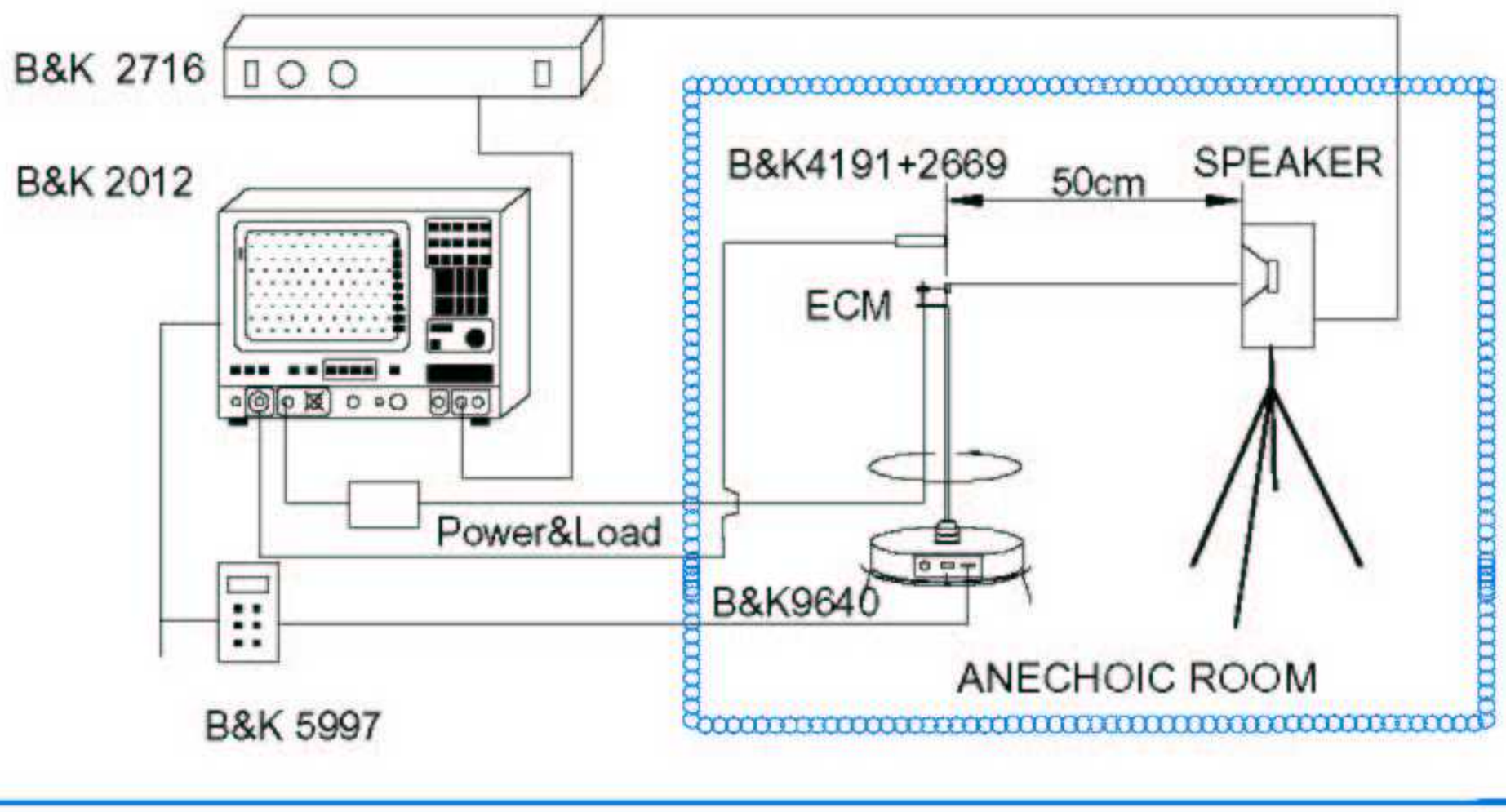
4 Directional Characteristic in Polar Pattern



5 Measurement Circuit

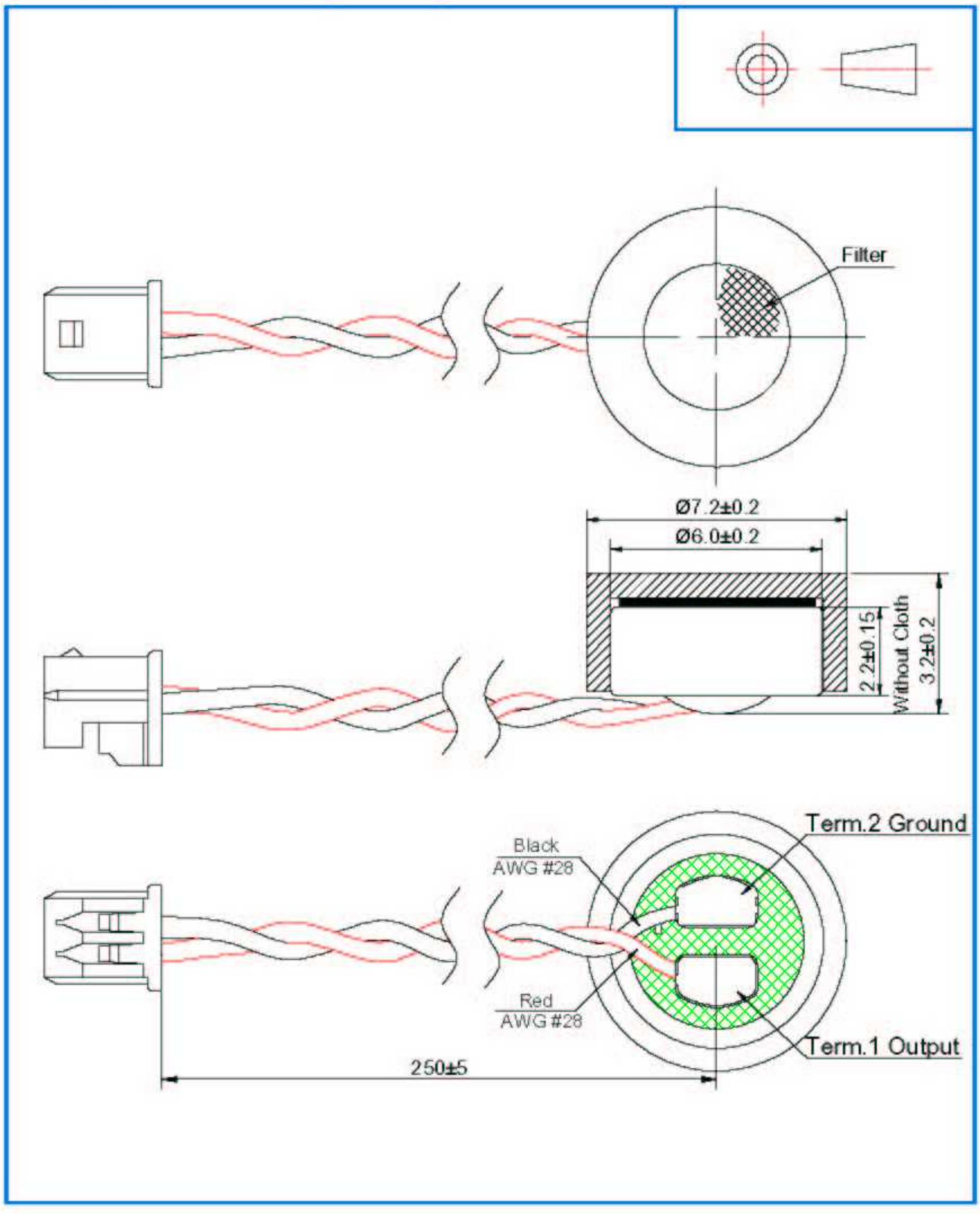


6 Test setup Drawing



7 Mechanical Characteristics

7.1 Appearance Drawing (Unit: mm)

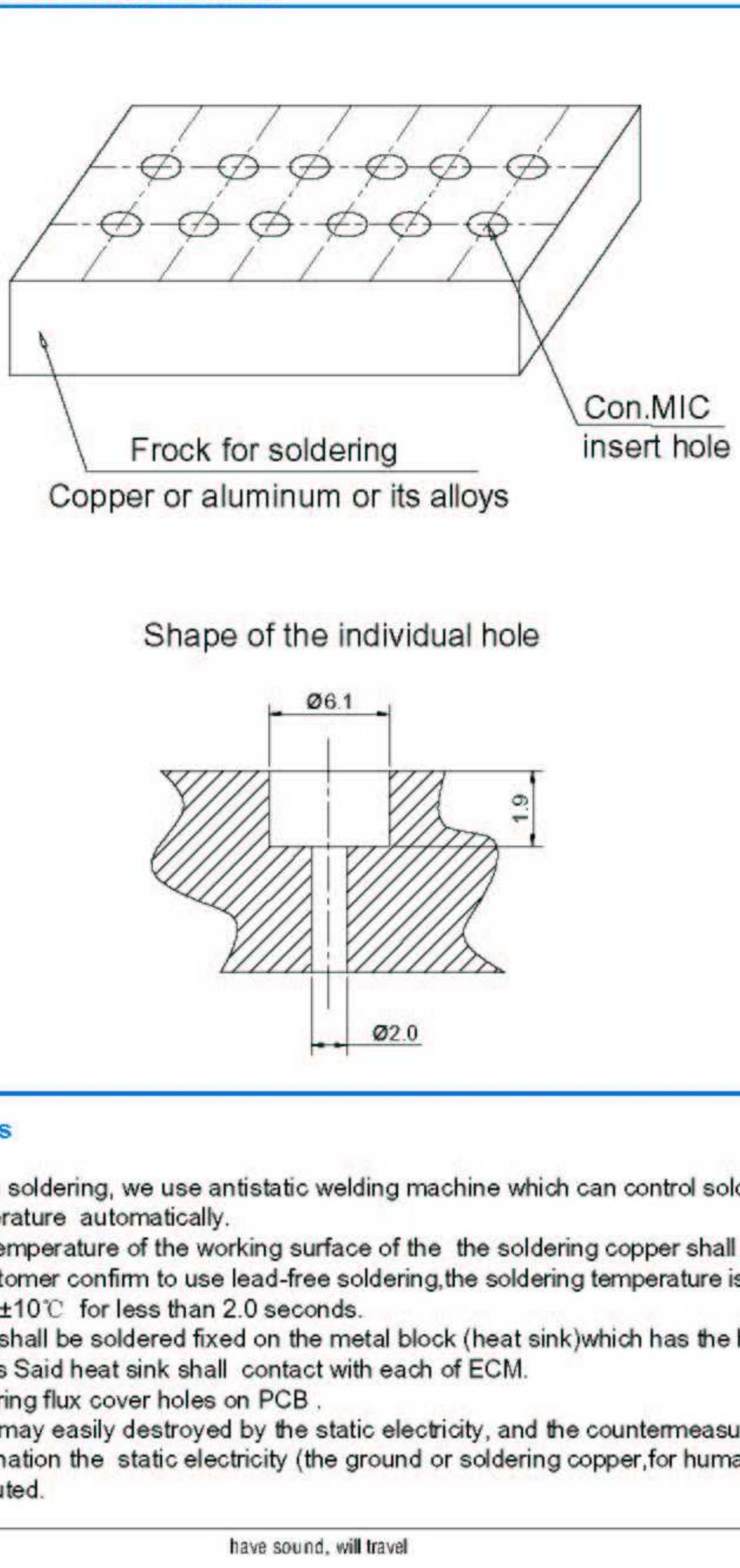


7.2 Weight

Less than 0.30g

8 soldering

8.1 Frock for soldering (Unit: mm)



8.2 Cautions

8.2.1. When soldering, we use antistatic welding machine which can control soldering temperature automatically.

8.2.2. The temperature of the working surface of the the soldering copper shall be below 270 ℃. If customer confirm to use lead-free soldering,the soldering temperature is 280℃±10℃ for less than 2.0 seconds.

8.2.3. ECM shall be soldered fixed on the metal block (heat sink)which has the higher radiation effects Said heat sink shall contact with each of ECM.

8.2.4. Soldering flux cover holes on PCB .

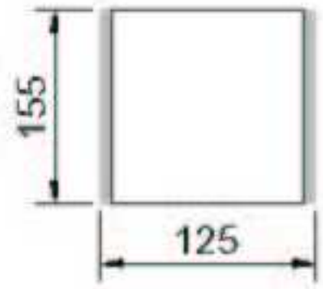
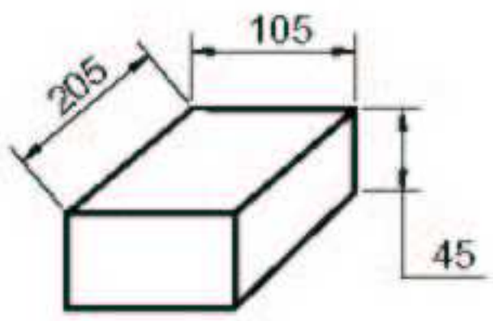
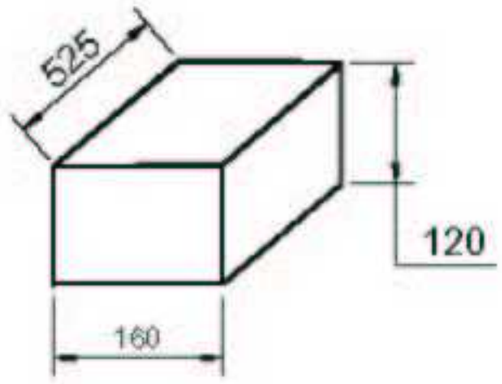
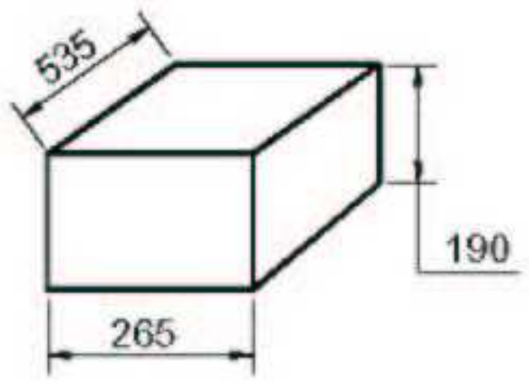
8.2.5. ECM may easily destroyed by the static electricity, and the countermeasure for elimination the static electricity (the ground or soldering copper,for human body)shall be executed.

9 Reliability Test

9.1 Vibration Test	To be no interference in operation after vibrations,10Hz to 55 Hz for 1 minute full amplitude 1.52 mm,for 2 hours at three axises in state of standard packing,sensitivity to be within ±3dB from initial sensitivity. (The measurement to be done after 2 hours of conditioning at +15℃～+35℃, R.H 45%～75%)
9.2 Drop Test	To be no interference in operation after dropped to concrete floor each one time from 1 meter height at three directions in state of Outer packing,sensitivity to be within ±3dB from initial sensitivity. (The measurement to be done after 2 hours of conditioning at +15 ℃～+35℃, R.H 45%～75%)
9.3 Temperature Test	A. After exposure at +85℃ for 200 hours,sensitivity to be within ±3dB from initial sensitivity. (The measurement to be done after 2 hours of conditioning at +15 ℃～+35℃, R.H 45%～75%) B. After exposure at -40℃ for 200 hours,sensitivity to be within ±3dB from initial sensitivity. (The measurement to be done after 2 hours of conditioning at +15 ℃～+35℃, R.H 45%～75%)
9.4 Humidity Test	After exposure at +40℃ and 90%~95% relative humidity for 200 hours,sensitivity to be within ±3dB from initial sensitivity. (The measurement to be done after 2 hours of conditioning at +15 ℃～+35℃, R.H 45%～75%)
9.5 Temperature Cycle Test	After exposure at -40℃ for 30 minutes, at 20℃ for 10 minutes, at+85℃ for 30 minutes,at 20℃ for 10 minutes,5 cycles,sensitivity to be within ±3dB from initial sensitivity. (The measurement to be done after 2 hours of conditioning at +15 ℃～+35℃, R.H 45%～75%)
9.6 Soldering Heat Shock	To be no interference in operation after soldering heat shock,temperature 260 ℃±5℃ for (2±0.5) seconds.If customer confirm to use lead-free soldering,the soldering temperature is 280℃±10℃ for 2±0.5 seconds,sensitivity to be within ±3dB from initial sensitivity. (The measurement to be done after 2 hours of conditioning at +15 ℃～+35℃, R.H 45%～75%)
9.7 Temperature Shock Test	After exposure at -40℃ for 60 minutes, at+85℃ for 60 minutes(change time 20 seconds)，32 cycles,sensitivity to be within ±3dB from initial sensitivity. (The measurement to be done after 2 hours of conditioning at +15 ℃～+35℃, R.H 45%～75%)

9 Packing

9.1 Packing Specification

	Drawing(Unit: mm)	Qty(pcs.)	Material	Marking
Packing		100	ESD HIPS	
Middle Box		10×100	Paper	Particular for Customer's P.O
Inner Box		6×1000	Paper	
Outer Box		2×6000	Paper	Particular for Customer's P.O

10.2 Packing explain

10.2.1 The facing of a quilt labeling

11 Stock and Transportation

11.1 Keep ECM in warehouse with less than 75% humidity and without sudden temperature change, acid air, any other harmful air or strong magnetic field.

11.2 The ECM with normal pack can be transported by ordinary conveyances.Please protect products against moist, shock, sunburn and pressure during transportation.

11.3 Storage Temperature Range： -40℃～+85℃

11.4 Operating Temperature Range： -30℃～+70℃

12 Output Inspection standard

Output inspection standard is excuted according to 《ISO2859-1:1999》.