

SPECIFICATION FOR APPROVAL

承认书

Customer (客户) : _____

Product Name (产品名称) : _____ 微型扬声器

Zhenmei Part No. (臻美型号): _____ MIML40A016001-02

Specification (臻美规格) : _____ 16 Ω 1W

Customer's Model No. (客户型号): _____

Specification No. (规格书编号): _____ MI-PS-40A016001-01

Number of the edition (版本号) : _____ A0

CUSTOMER'S APPROVED SIGNATURE 客户承认盖章		



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MIML40A016001-02

1. 简介 SCOPE

本产品适用于电脑、手机、对讲机等人工智能安防系统等产品

This product is suitable for computer, mobile phone, walkie talkie and other artificial intelligence security system products

2. 外观尺寸图 MECHANICAL LAYOUT & DIMENSIONS

见图 Shown in Fig.4

3. 概要 GENERAL REQUIREMENTS

3.1 使用温度 OPERATING TEMPERATURE RANGE: $-20^{\circ}\text{C} \sim +60^{\circ}\text{C}$

3.2 储存温度 Storage Temperature: $-30^{\circ}\text{C} \sim +70^{\circ}\text{C}$

3.3 标准测试条件 STANDARD TEST CONDITIONS:

温度 Temperature: $17 \sim 25^{\circ}\text{C}$ 湿度 Relative Humidity: $45\% \sim 80\% (\text{RH})$

大气压力 Air Pressure: $860 \sim 1060 \text{ MPa}$

3.4 仲裁测试条件 JUDGEMENT CONDITIONS:

温度 Temperature: $20 \pm 2^{\circ}\text{C}$ 湿度 Relative Humidity: $60\% \sim 70\% (\text{RH})$

大气压力 Air Pressure: $860 \sim 1060 \text{ MPa}$

4. 扬声器规格 SPEAK ELECTRICAL AND ACOUSTICAL SPECIFICATION

4.1 声压级 Sound Press Level (SPL): $89 \pm 3 \text{ dB SPL} / 4\text{V}/10\text{CM}$ at 2000Hz, in 1cc box

4.2 阻抗 IMPEDANCE: $16 \pm 15\% \Omega$

4.3 频响曲线 FREQUENCY RESPONSE CURVE: As shown in fig(2)

4.4 谐振频率 RESONANCE FREQUENCY: $580 \pm 20\text{Hz}$ in free air, $1100 \pm 20\text{Hz}$ in 1CC box.

4.5 额定功率 Rated Power: 1W in1CC box

4.6 最大功率 Max. Power: 1.5W must be normal white noise for 1 minute in 1.0cc box

4.7 谐波失真 DISTORTION : 10% Max. 2kHz (Mounted in 1cc measure box and in a baffle) Test at 4Vrms/10cm

4.8 纯音 AUDIBLE NOISE: Must be free audible noise 300Hz-10KHz;4Vrms,while testing in 1cc box.

4.9 极性 POLARITY: Right side is the “+”, As show in the picture

4.10 重量 Weight: Approx. 5g

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■测试方法图 MEASURING CIRCUIT (Fig. 1)

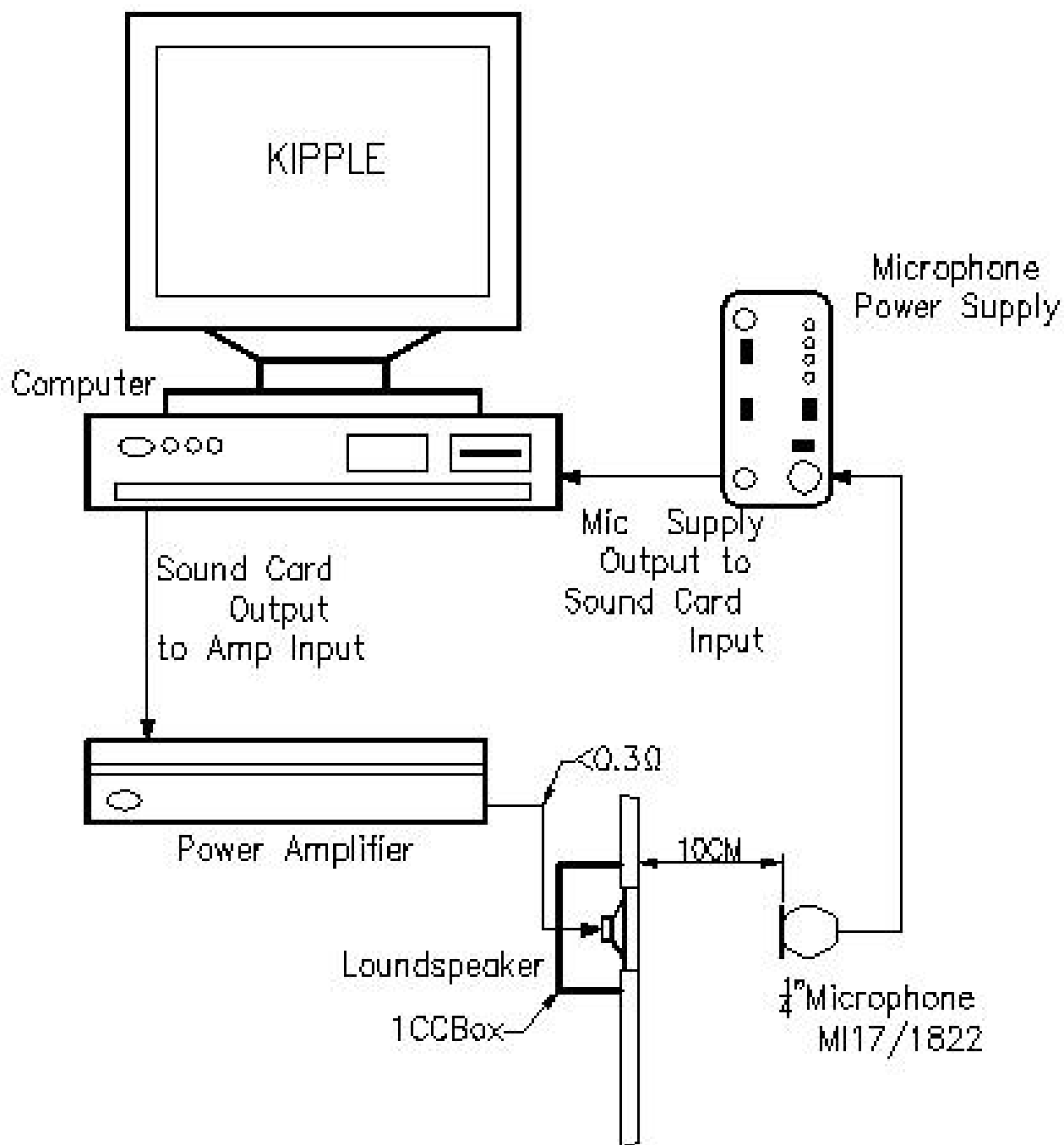
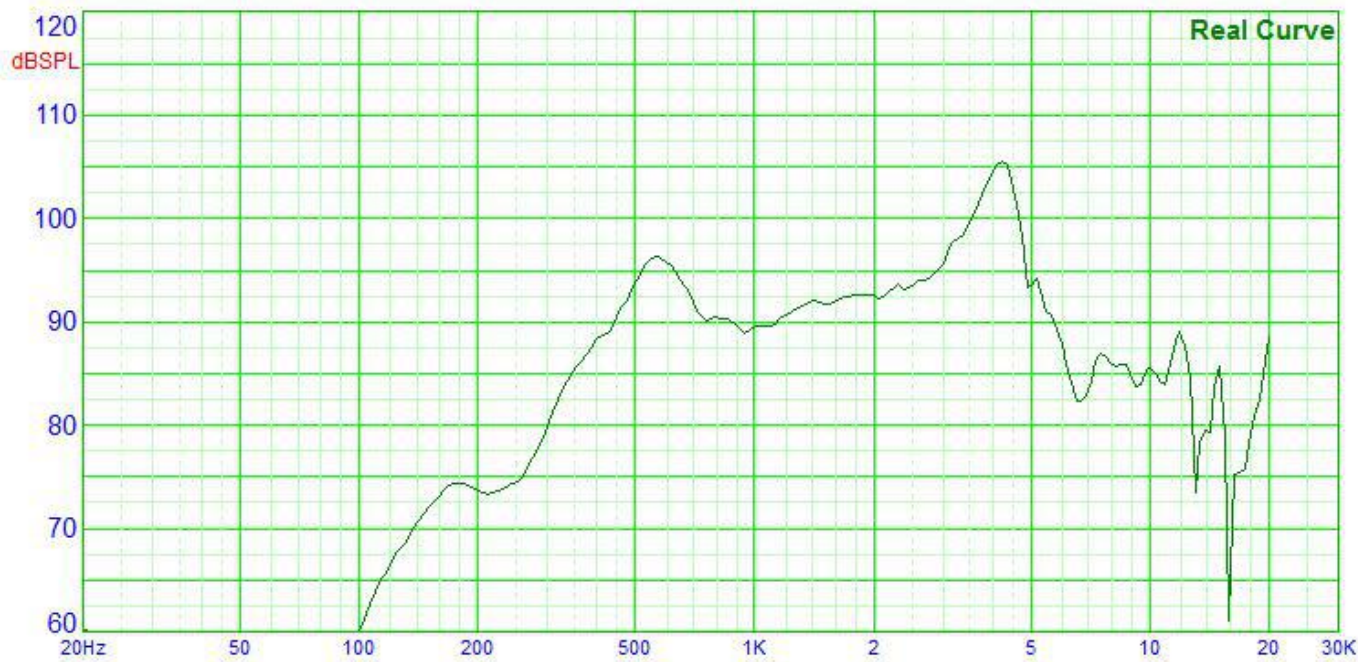


Fig.1 measuring diagram

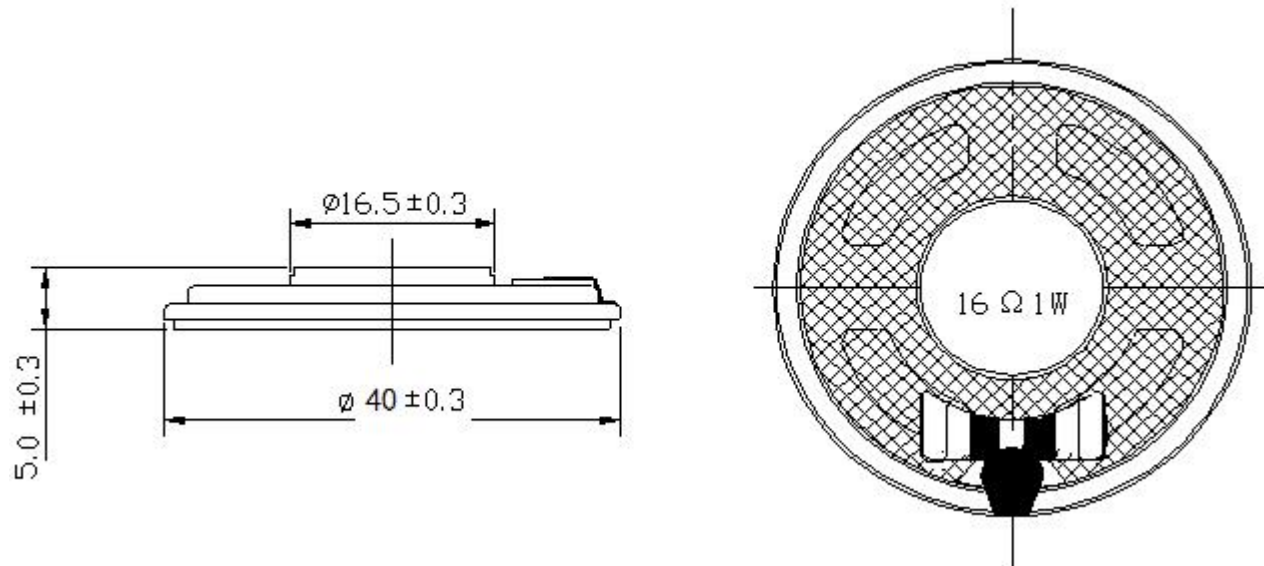
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■频率响应曲线图 TYPICAL FREQUENCY RESPONSE CURVE (Fig. 2)

Fig.2 Typical frequency response
 curve



■外观尺寸图 DIMENSIONS (Fig. 3)



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5. 可靠性测试 RELIABILITY TESTS

扬声器进行下列测试后 SPL 变化不允许超出 $\pm 5\text{dB}$ ，不允许有任何机械或者热损伤。

The sound pressure as specified shall neither deviate more than $\pm 5\text{dB}$ from the initial value, nor any significant damage after any of following testing.

5.1 高温试验 HIGH TEMPERATURE TEST

High temperature: $+70\pm 2^{\circ}\text{C}$

Duration: 16 hours

5.2 低温试验 LOW TEMPERATURE TEST

Low temperature : $-30\pm 2^{\circ}\text{C}$

Duration: 16 hours

5.3 冷热冲击试验 HEAT SHOCK TEST

High temperature: $+70\pm 2^{\circ}\text{C}$

Low temperature: $-30\pm 2^{\circ}\text{C}$

Changeover time: < 30 seconds

Duration: 1 hour

Cycle: 5

5.4 高温高湿试验 HUMIDITY TEST

Temperature: $+40\pm 2^{\circ}\text{C}$

Relative humidity: 90~95%

Duration: 16 hours

5.5 高低温循环试验 TEMPERATURE CYCLE TEST

Temperature: -30°C $+20^{\circ}\text{C}$ $+70^{\circ}\text{C}$

Duration: 30 minutes 15 minutes 30 minutes

Temperature gradient: $1\sim 3^{\circ}\text{C}/\text{min.}$

Cycle: 5

5.6 跌落试验 DROP TEST

Free drop a unit to the surface of 10mm thick board

Height: 100cm

Cycle: 6 (1 each plain) onto the concrete board

5.7 可靠性试验 Load test

White Noise.: $20\sim 20\text{kHz}$ Rated Power: 1W 96Hours in lcc box

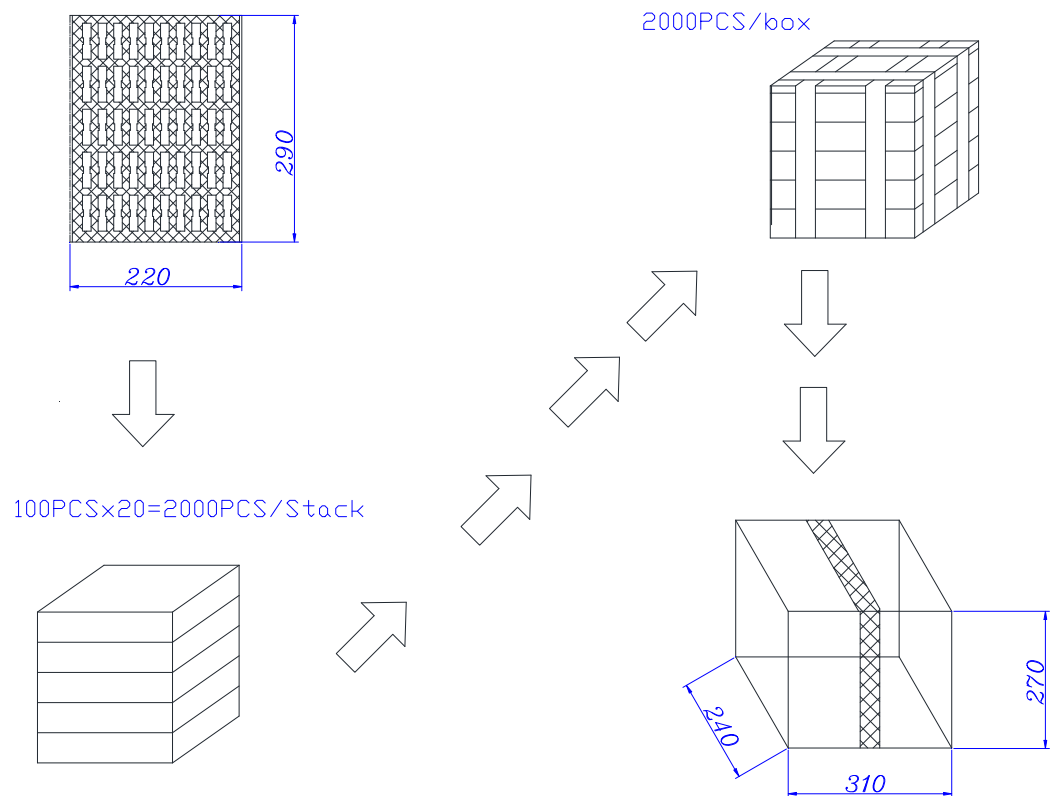
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编号 No.	零件名称 PART NAME	材料 MATERIAL	数量 Q' TY	备注 REMARK
1	主架 FRAME	PPA or PBT	1	
2	磁钢 MAGNET	NdFeB	1	
3	极片 POLE PIECE	SPCC	1	
4	U 铁 U YOKE	SPCE	1	
5	膜片 DIAPHRAGM	PEEK or PEN	1	
6	音圈 VOICE COIL	COPPER WIRE	1	
7	前盖 FRONT CAP	PPA or PBT	1	
8	焊片 SPRING TERMINAL	SUS	2	
9	垫圈 GASKET	0.3T	1	

Fig4. Outer dimension

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7. 包装图 PACKING （仅供参考）



每盘 100 个	100pcs of speaker in each tray
每箱 20 盘	20 trays in one carton
总计:2000 个 / 1 箱	Total:2000 pcs / 1 carton
毛重: 4.0KGS	Gross Weight:4.0KGS
净重: 2.5KGS	Net Weight: 2.5KGS

Fig5. Packing dimension