SPEC. No.: RK00266 P1/5

# 兴化市华宇电子有限公司

## **SPECIFICATION**

### **SHEET FOR APPROVAL**

MULTI-FUNCTIONAL TRANSDUCER (2 MOI	DES: RECEIVEI	R & SPEAKER)
CUSTOMER:		
MODEL NUMBER: L2040-8B-2F28R	( <b>Ф</b> 20*40mm	8 <b>Ω</b> 2W)
CUSTOMER PART NUMBER:		

	DESIGNED	CHECKED	APPROVED
SIGNATURE	AricZhu	朱尚书	
DATE	2012-6-28	2012-6-28	

CUSTOMER CONFIRMATION	
SIGNATURE:	
DATE:	

SPECIFICATION						P2/5
MODEL NO.	L2040-8B-2F28R	UPDATE	V00	ISSUED DATE	2012-6-28	

1. **SCOPE** This specification cover our product of mylar speaker unit for use in DVD, telephone, alarm system and calling system.

#### 2. ELECTRICAL ANDACOUSTICAL CHARACTERISTIC

2. 1 SOUND PRESSURE LEVEL (S.P.L)

Sound pressure level shall be indicated by the mean value of those measured at the specified frequency range.81±3 dB at 1200、1500、1800、2000 Hz in average. Measure Condition: sin swept measurement at 0.1W on axis at 0.1M Measurement Circuit: shown in Fig. 2.

- 2. 2 **RESONANCE FREQUENCY(FO):980±20%Hz** at 1V.(NO Baffle ) **Measurement Circuit**:Shown in Fig.2.
- 3 RATED IMPEDANCE: 8±20% Ω (at 1KHz, 1V)
   Measure Condition: the impedance response is measured with Mylar speaker.
   Measurement Circuit: shown in Fig. 2.
- 2. 4 FREQUENCY RANGE: Fo~20KHz (Deviation 10dB from average S.P.L.)
  Frequency Response Curve: Shown in Fig. 3. Whit IEC Baffle plate.
  Frequency Response Measurement Circuit: Shown in Fig. 2.
- 2. 5 RATED INPUT POWER (CONTINUUM): 2.0W
- 2. 6 MAX INPUT POWER (SHORT-TERM): 2.0W

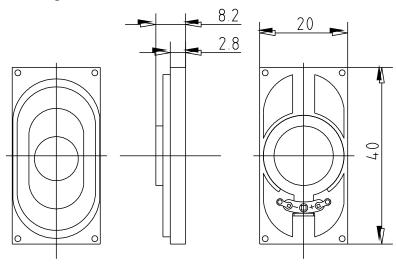
  Testing will be done using IEC filter with white noise source for 1 minute with no degradation in performance.
- 2. 7 **TOTAL HARMONIC DISTORTION:** Less than 5% at 1KHz, **2.0W** Measurement Circuit:Shown in Fig.2.
- 2. 8 **OPERATION:** Must be normal at sine wave and program source **2.0W.**
- 2. 9 **POLARITY:** When a positive DC current is applied to the terminal marked(+), Diaphragm shall move forward. Marking:
- 2. 10 PURE SOUND DETECTION:

Buzz, Rattle, etc Should not be audible at 4 VRMS sine wave from Fo ~ 10KHz.

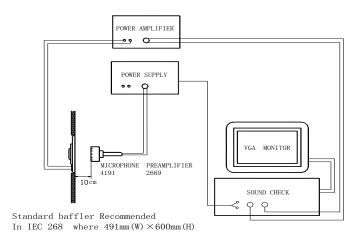
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### 3. DIMENSIONS (Fig.1)

Unless otherwise specified, tolerance: ±0.5 (unit: mm)



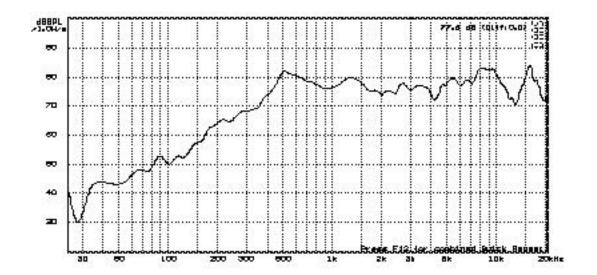
#### 4. FREQUENCY MEASURING CIRCUIT (SPEAKER MODE) (Fig.2)



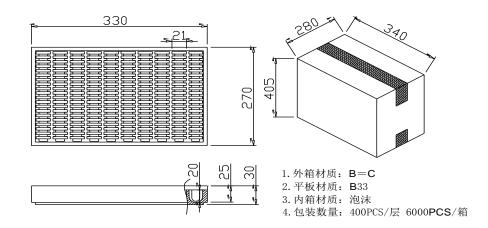
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## 5. FREQUENCY RESPONSE MASK & TYPICAL FREQUENCY RESPONSE CURVE (SPEAKER MODE) (Fig. 3)



#### 6. PACKAGING EXPLAIN



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#### 7. RELIABILITY TESTS $\pm$

The sound pressure as specified shall neither deviate more than  $\pm 3dB$  from the initial value, nor any significant damage after any of following testing.

#### 7.1 HIGH TEMPERATURE TEST

High temperature: +55±2°C

Duration: 24 hours

#### 7.2 LOW TEMPERATURE TEST

Low temperature :  $-20\pm2^{\circ}$ C Duration: 24 hours

#### 7.3 HEAT SHOCK TEST (See in Fig.6)

High temperature:  $+55\pm2^{\circ}\text{C}$ Low temperature:  $-20\pm2^{\circ}\text{C}$ Changeover time: <30 seconds
Duration: 45 minutes

Cycle: 10

#### 7.4 HUMIDITY TEST

Temperature:  $+20\pm2$ °C Relative humidity:  $90\sim95\%$  Duration: 24 hours

#### 7.5 TEMPERATURE CYCLE TEST

Temperature:  $-20^{\circ}$ C  $+55^{\circ}$ C Duration: 45 minutes 45 minutes

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

Cycle: **10** 

#### 7.6 DROPTEST

Height: 1.0 m

Cycle: 6 (1 each plain)

onto the concrete board

#### 7.7 LOAD TEST

Speaker mode: White noise (EIA filter) for 24 hours @ 2.0W input power @ 20-20KHz.

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