

# SPECIFICATION

## SHEET FOR APPROVAL

MULTI-FUNCTIONAL TRANSDUCER (2 MODES: RECEIVER & SPEAKER)

**CUSTOMER:** \_\_\_\_\_

**MODEL NUMBER: M2850-8B-0L03R (Φ28mm 8Ω 0.5W)** \_\_\_\_\_

**CUSTOMER PART NUMBER:** \_\_\_\_\_

	DESIGNED	CHECKED	APPROVED
SIGNATURE	AricZhu	朱尚书	
DATE	2011-7-5	2011-7-5	

### CUSTOMER CONFIRMATION

**SIGNATURE:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

SPECIFICATION						P2/5
MODEL NO.	M2850-8B-0L03R	UPDATE	V00	ISSUED DATE	2011-7-5	
1. <b>SCOPE</b> This specification cover our product of mylar speaker unit for use in DVD, telephone, alarm system and calling system.						
2. <b>ELECTRICAL ANDACOUSTICAL CHARACTERISTIC</b>						

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. **93±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):680±20%Hz** at 1V.(NO Baffle )  
**Measurement Circuit:**Shown in Fig.2.
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~10KHz** (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): 0.25W**
2. 6 **MAX INPUT POWER (SHORT-TERM): 0.5W**  
 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,**0.25W**  
 Measurement Circuit:Shown in Fig.2.
2. 8 **OPERATION:** Must be normal at sine wave and program source **0.5W**
2. 9 **POLARITY:** When a positive DC current is applied to the terminal marked(+),Diaphragm shall move forward. Marking: **8Ω 0.5W**
2. 10 **PURE SOUND DETECTION:**  
 Buzz,Rattle,etc Should not be audible at **2.8 VRMS** sine wave from **Fo ~ 7KHz**.

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### 3. DIMENSIONS (Fig.1)

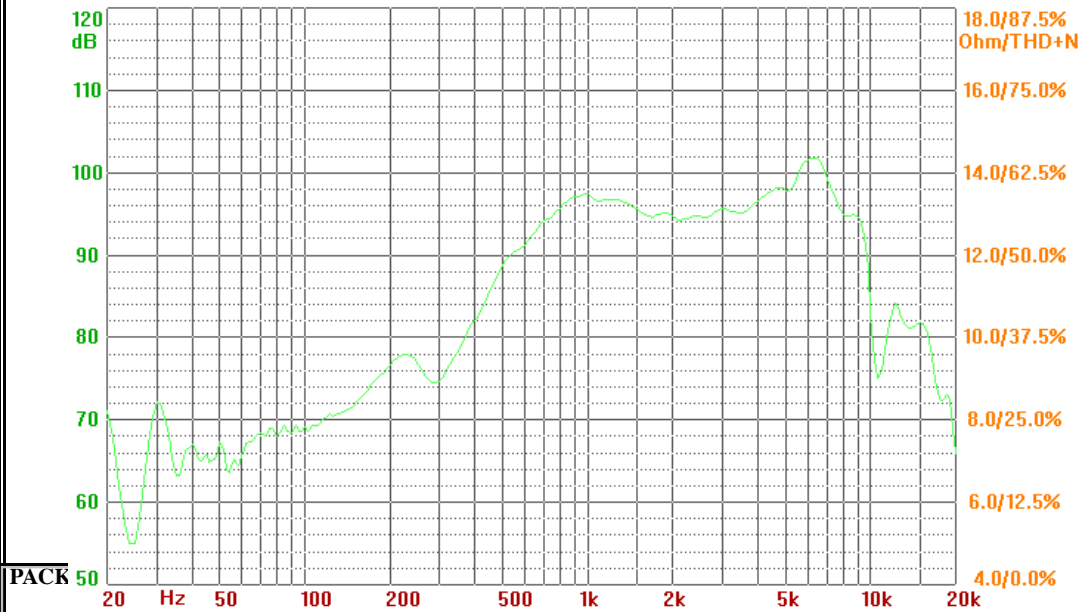
Unless otherwise specified, tolerance: ±0.3 (unit: mm)



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

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



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**7. RELIABILITY TESTS**

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

**7.1 HIGH TEMPERATURE TEST**

High temperature:  **$+55\pm 2^\circ\text{C}$**   
 Duration: **96 hours**

**7.2 LOW TEMPERATURE TEST**

Low temperature :  **$-20\pm 2^\circ\text{C}$**   
 Duration: **24 hours**

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

High temperature:  **$+55\pm 2^\circ\text{C}$**   
 Low temperature:  **$-20\pm 2^\circ\text{C}$**   
 Changeover time: **< 30 seconds**  
 Duration: **45 minutes**  
 Cycle: **10**

**7.4 HUMIDITY TEST**

Temperature:  **$+20\pm 2^\circ\text{C}$**   
 Relative humidity: **90~95%**  
 Duration: **24 hours**

**7.5 TEMPERATURE CYCLE TEST**

Temperature:  **$-20^\circ\text{C}$      $+55^\circ\text{C}$**   
 Duration: **45 minutes    45 minutes**  
 Temperature gradient:  **$1\sim 3^\circ\text{C}/\text{min.}$**   
 Cycle: **10**

**7.6 DROP TEST**

Height: **1.0 m**  
 Cycle: **6 (1 each plain)**  
**onto the concrete board**

**7.7 LOAD TEST**

Speaker mode: White noise (EIA filter) for **96 hours @ 1.0W** input power  
**@20-20KHz.**

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