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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



# 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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2					
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### 3. DIMENSIONS (Fig.1)

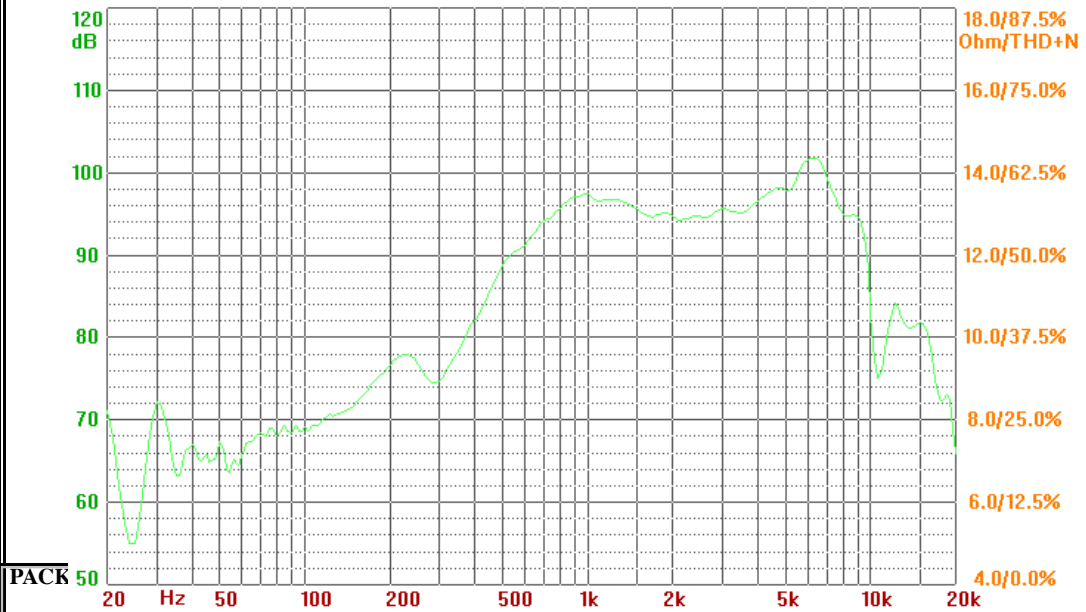
Unless otherwise specified, tolerance: ±0.3 (unit: mm)



**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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