

# 请承认书

Version No.: <u>V2.0</u>

| 常州       | 昊 翔 日      | 电 子 有       | 限公司             |
|----------|------------|-------------|-----------------|
| Changzho | u HaoXiai  | ng Electror | nic Co., LTD    |
| 客户名      | 3 称        |             |                 |
| CUSTOME  | R NAMER :_ |             |                 |
| 产品名      | 3 称        |             |                 |
| COMMOD   | :_         | Speaker     | box             |
| 产品型      | 型 号        |             |                 |
| MODEL NO | · :_       | TDA-B7028   | KC4U16          |
| 客户料      | 斗 号        |             |                 |
| PART NO  | :          |             |                 |
|          |            | <u> </u>    |                 |
| 审核       | 秦皓         | 主           | 唐俐雅 May.30,2019 |
|          |            |             |                 |
|          |            |             |                 |

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### **A. MODEL:** TDA-B7028KC4U16

## **B. SPECIFICATION**

|  | Test condition: | Temperature: 15~35°C | Related Humidity:25~75% | (GB/T9396-1996) |
|--|-----------------|----------------------|-------------------------|-----------------|
|--|-----------------|----------------------|-------------------------|-----------------|

| No. | Item Specification          |   | Condition   |  |  |
|-----|-----------------------------|---|---|--|--|
| 1   | Dimension                   | 70x28xH16.8mm   |   |  |  |
| 2   | Impedance                   | $4\pm15\%\Omega$  |   |  |  |
| 3   | Output Sound Pressure Level | Output Sound Pressure Level 90 ± 3dB(0.1Watt,0.1Meter)  |   |  |  |
| 4   | Response Frequency          | 300±20% Hz  |   |  |  |
| 5   | Frequency Range             | F0~20KHZ  | Average SPL -10dB                                       |  |  |
| 6   | Distortion                  | ≤5%   | AtAt 1KHz-10KHz 0.1W ,0.1M                              |  |  |
| 7   | Power Rating                | Normal: 2.5W<br>Maximum: 3W   | Sine wave   |  |  |
| 8   | Operating temperature       | - 20 ~ + 60℃  |   |  |  |
| 9   | Storage temperature         | - 20 ~ + 60℃  |   |  |  |
| 10  | Abnormal Sound test         | Must be Normal Tested By 3.16V. Sine Wa   | lormal Tested By 3.16V. Sine Wave at F0~3KHz /3 second. |  |  |
| 11  | Weight                      | 25g   |   |  |  |
| 12  | Polarity                    | Diaphragm shall move Forward while Apply a Positive DC Signal to the "+ or "Marked" Terminal. |   |  |  |
| 13  | RoHS                        | The Speaker is RoHS compliant.  |   |  |  |

### **C.ENVIRONMENT TEST**

| No. | Item                      | Condition   | <b>Evaluation standard</b>  |
|-----|---------------------------|---|---|
| 1   | High Temperature          | After being placed in a chamber at +60±2℃ for 96 hours  |   |
| 2   | Low Temperature           | After being placed in a chamber at -20 $\pm 2^{\circ}$ C for 96 hours.  |   |
| 3   | Humidity                  | After being placed in a chamber at $\pm 40 \pm 2$ °C and $90\sim95\%$ (RH) Relative Humidity for 96 hours.                    |   |
| 4   | Heat shock test           | -20°C   -20°C   30s   | Being placed for 4 hours at room temperature, speaker shall be measured. SPL should not deviate by ± 5 dB,and nor any |
| 5   | Temperature Cycle<br>test | The part shall be subjected to 5 cycles. One cycle shall be consist of: $\begin{array}{c ccccccccccccccccccccccccccccccccccc$ | significant damage.   |

#### D. MECHANICAL CHARACTERISTICS

| No. | Item      | Test condition   | Evaluation standard   |
|-----|-----------|--|---|
| 1   | Drop Test | Mounted with dummy set mass:100g Height:70cm Cycle:6(each plain) onto concrete board | SPL shall not deviate by ±5 dB from pre-test measurement, and nor any significant damage. |

#### **E.RELIABILTY TEST**

| No. | ltem      | Test conditions                     | Evaluation standard  |
|-----|-----------|-------------------------------------|--|
| 1   | Load test | Pink noise with HPF 3.16V 96 Hours. | After test, SPL shall not deviate by ±5dB from pre-test measurement,and nor any significant damage . |

### F. MEASURING METHOD(SPEAKER MODE)

F-1.Test Condition

(a)STANDARD:

Temperature :  $15 \sim 35^{\circ}$ °C, Relative humidity :  $45\% \sim 85\%$ ,

Atmospheric pressure: 860mbar to 1060mbar

(b)JUDGEMENT:

Temperature :  $20\pm3^{\circ}$ °C, Relative humidity :  $60\% \sim 70\%$ ,

Atmospheric pressure: 860mbar to 1060mbar

F-2.Standard Test Fixture

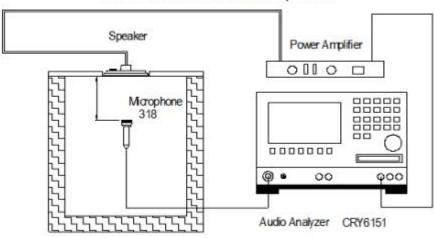
1.Input Power :0.1W 2.Zero Level : -dB

3.Mode: TSR

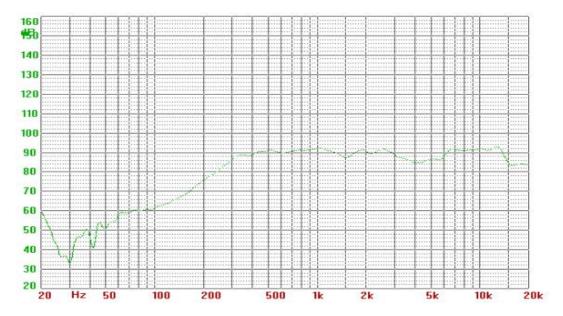
4.potentiometer Range: 50dB

5.Sweep Time: 0.5sec

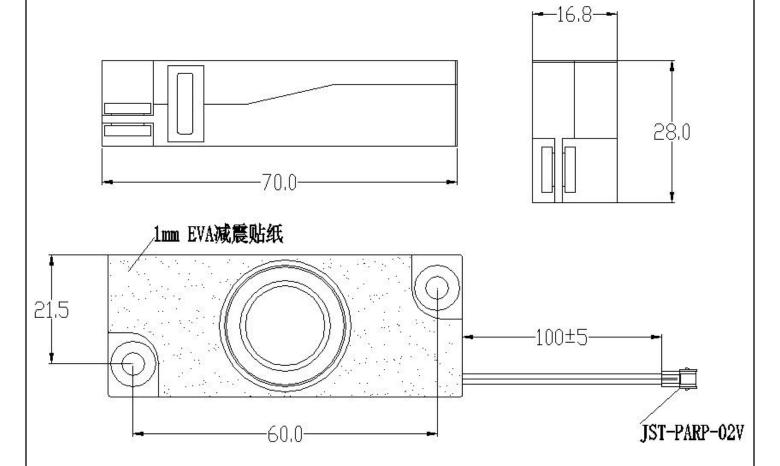
#### Standard test condition of speaker



### **G.FREQUENCY CURVE**



### **H.APPEARANCE DRAWING**



Unit:mm Tolerance :  $\pm 0.5$ mm

#### I. NOTICE ON PRODUCT STORAGE

**a**. Please store the products in room where the temperature / humidity is stable. And avoid such places where there are large temperature changes. Please store the products under the following conditions:

Temperature: -10 to +40 (degree C)

Humidity: 15 to 85% R.H.

- b. Expire date (Shelf life) of the products is 6 months after delivery under the conditions of a sealed and an unopened package. Please use the products within 6 months after delivery. If you store the products for a long time (more than 6months), use carefully because the products may be degraded in the solder-ability and/or rusty.

  Please confirm solder-ability and characteristics for the products regularly.
- C. Please use the products immediately after the package is opened, because the characteristics may be reduced in quality, and/or be degraded in the solder-ability due to storage under the poor condition.

#### J. REVISION

| No. | DATE        | DESCRIPTION       | REMARK          | VERSION |
|-----|-------------|-------------------|-----------------|---------|
| 1   | May.30,2019 | Initial condition | TDA-B7028KC4U16 | V2.0    |
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