



SPECIFICATION

Version No.: V2.3

常州昊翔电子有限公司
Changzhou HaoXiang Electronic Co., LTD

客户名称

CUSTOMER NAMED : _____

产品名称

COMMODITY : SMD Speaker

产品型号

MODEL NO : TDA-M1515KC8D40

客户料号

PART NO : _____

审核	秦皓	主办	唐俐雅 Mar.20,2019
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客户承认栏			
承认		拒收	

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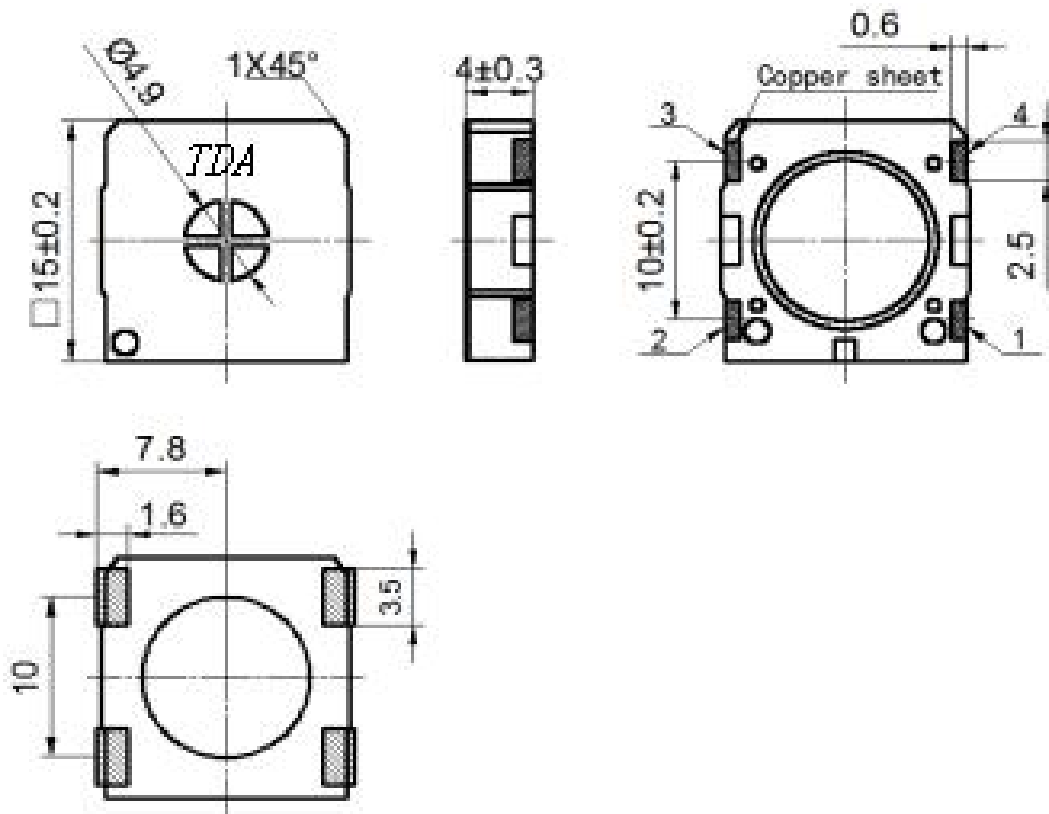
A. MODEL: TDA-M1515KC8D40

B. SPECIFICATION

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

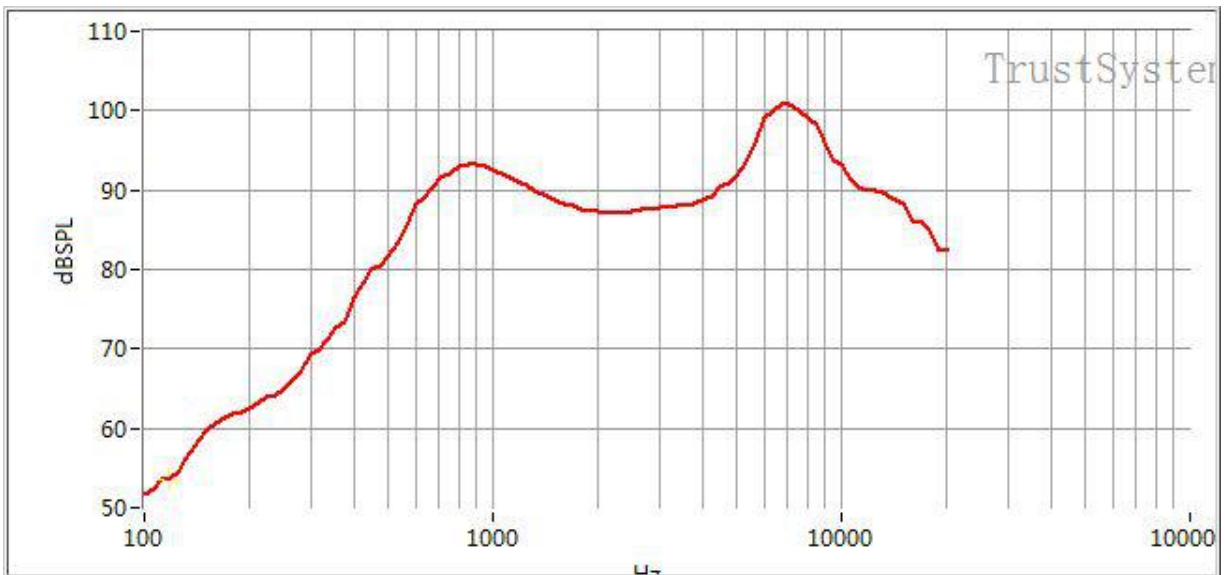
No.	Item	Specification	Condition
1	Dimension	15 x 15 x H4.0mm	
2	Weight (MAX)	1.5g	
3	Impedance	8±20%Ω	At 0.1M,0.5W
4	Output Sound Pressure Level	89±3dB(0.1M,0.5W)	Average at1k, 1.6k, 2.0k, 3.2kHz
5	Response Frequency	800±15%Hz	
6	Frequency Range	F0~6KHz	
7	Power Rating	Normal: 0.5Watts Maximum: 0.8 Watts	Sine Wave
8	Operating temperature	-40 ~ +100°C	
9	Storage Temperature	-40 ~ +105°C	
10	Abnormal Sound test	should not be audible at 2.37V sine wave between 300-6000Hz	Sine Wave
11	RoHS	The Speaker is RoHS compliant.	

C. APPEARANCE DRAWING



Unit: mm Tolerance : ± 0.5 mm

D.FREQUENCY RESPONSE



E. MEASURING METHOD(SPEAKER MODE)

E-1. Test Condition

(a) STANDARD:

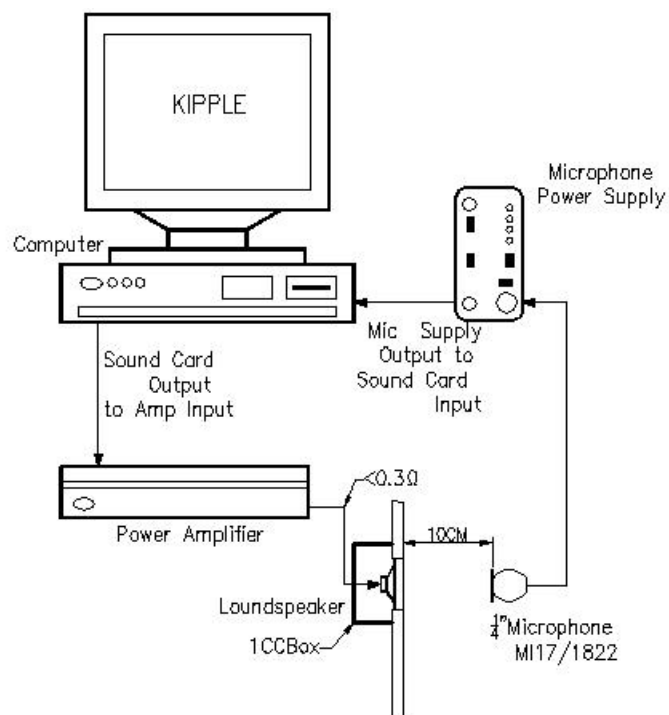
Temperature : $17 \sim 25^{\circ}\text{C}$, Relative humidity : $45\% \sim 80\%$,
Atmospheric pressure : $860\text{mbar to }1060\text{mbar}$

(b) JUDGEMENT:

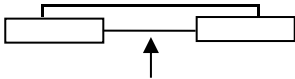
Temperature : $20 \pm 3^{\circ}\text{C}$, Relative humidity : $60\% \sim 70\%$,
Atmospheric pressure : $860\text{mbar to }1060\text{mbar}$

E-2. Standard Test Fixture

1. Input Power : $0.5\text{W}(2.37\text{ V})$
2. Zero Level : $-dB$
3. Mode : **SPEAKER**
4. potentiometer Range : 50dB
5. Sweep Time : 0.5sec

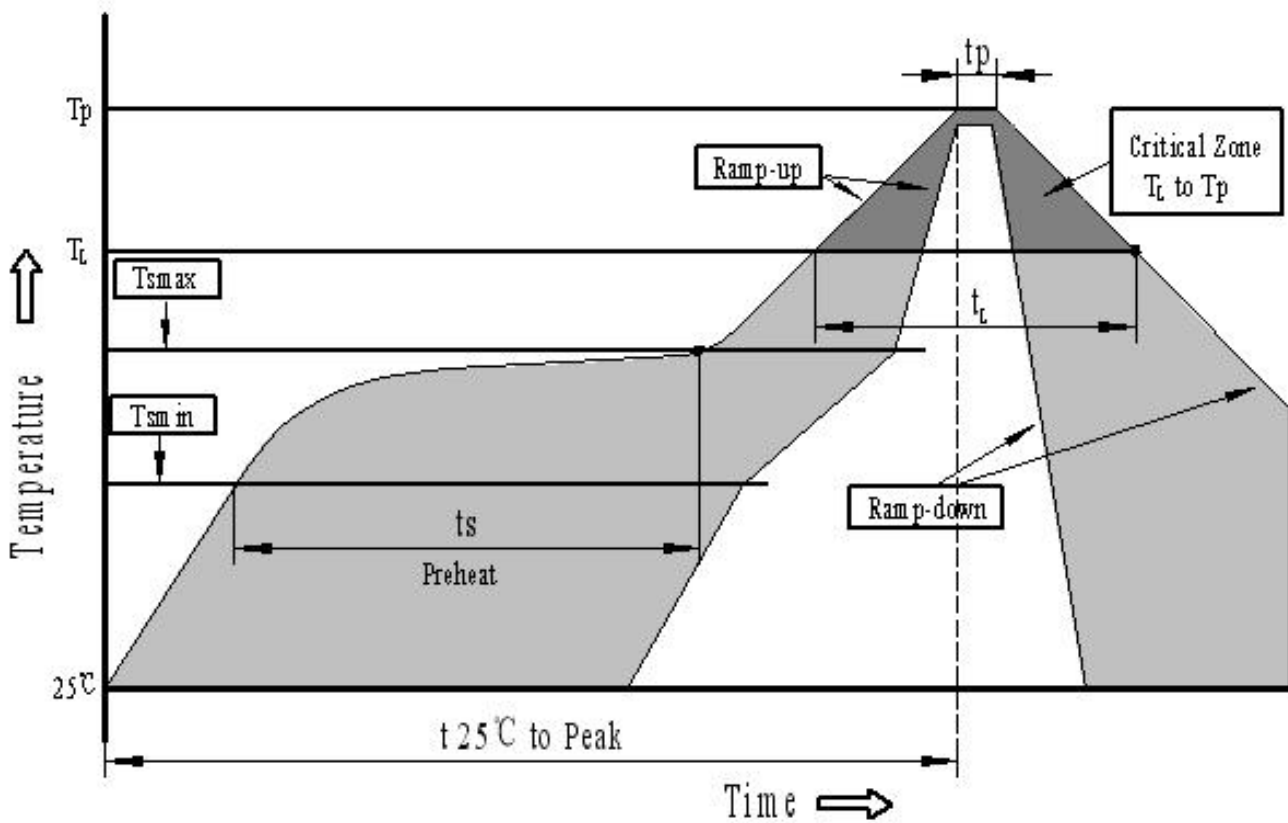


F.RELIABILTY TEST

No.	Item	Condition	Evaluation standard
1	High temp. storage life	The part shall be capable of Withstanding a storage temperature is +105°C for 120 hours	All specifications must be satisfied after the test.
2	Low temp storage life	The part shall be capable of Withstanding a storage temperature is -40°C for 120 hours	
3	Temp. Cycle	Total 5 cycles 1 cycle consisting of -40±2°C, 30 minutes 20±5°C 15 minutes 105±2°C 30 minutes 20±5°C 15 minutes	
4	Humidity Test	40±2°C,90~95%RH, 120hours	
5	Vibration Test	The part shall be subjected to a vibration cycle is 10Hz in a period of 1 minute. Total peak amplitude shall be 1.52mm(9.3g). The vibration test shall consist of 2 hours per plane in each three mutually perpendicular planes for a total time of 6 hours	
6	Shock	Sounder shall be measured after being applied shock (980m/s ²) for each three mutually perpendicular directions to each of 3 times by half sine wave	
7	Drop Test	Dropped naturally from 700mm height onto the surface of 10mm thick wooden board. 2directions-upper and side of the part are to be applied.	
8	Lead pull	The part shall be pushed with a force of 9.8N for 10 ± 1 seconds behind the part. 	After the test part shall meet specifications without any degradation in appearance and performance.
9	Recommended temp. Profile for Reflow Oven	Shown in Fig.1	

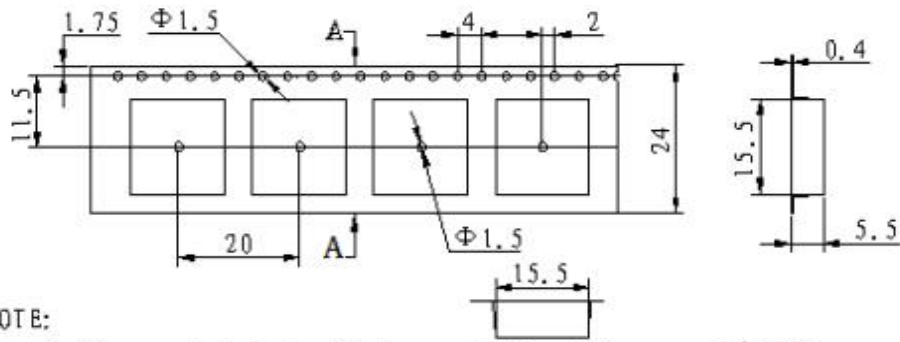
Warranty: For a period of one year from date of manufacture under normal operations.

G. RECOMMENDED TEMP. ROFILE FOR REFLOW OVEN(Fig.1)



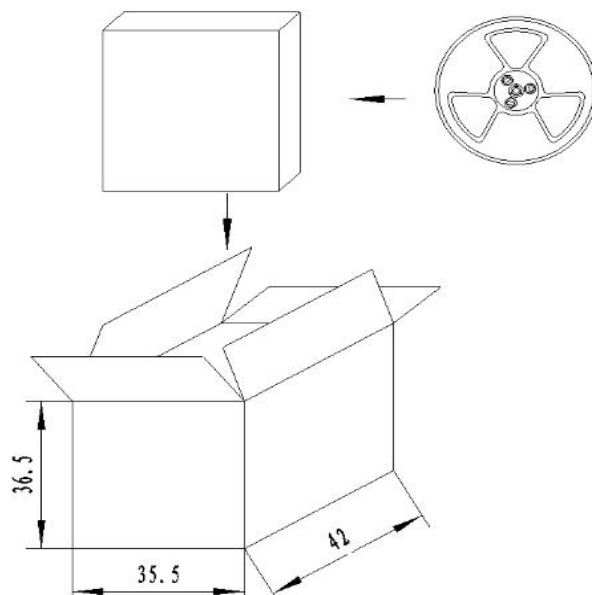
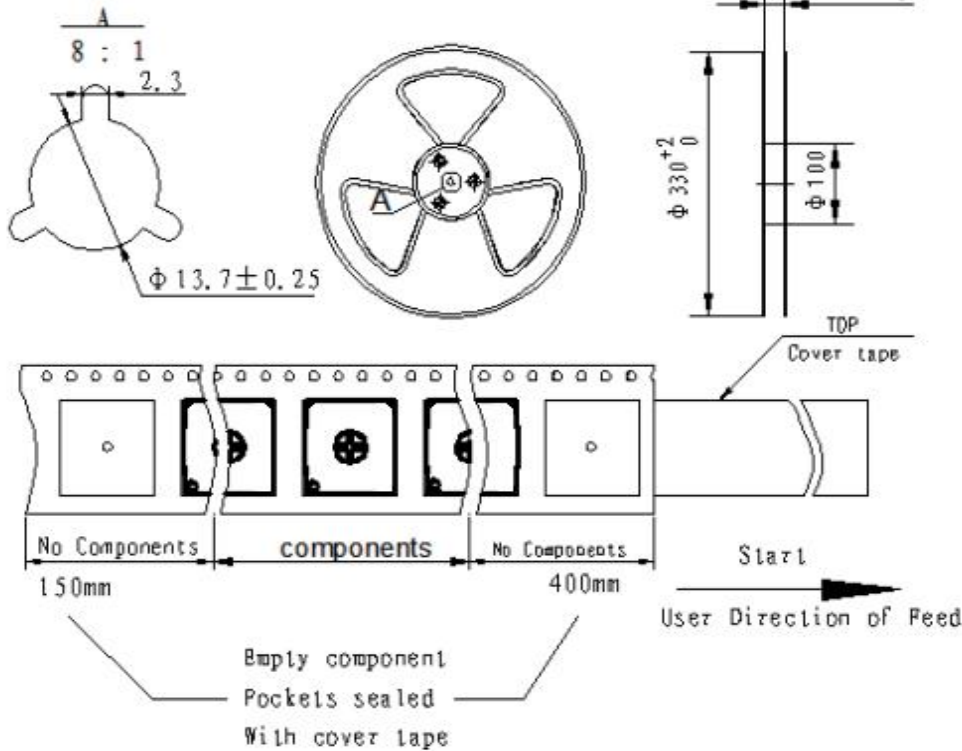
Profile Feature	Pb-Free Assembly
Average ramp-up rate(T_L to T_p)	3°C/second max.
Preheat	
-Temperature Min.(T_{smin})	150°C
-Temperature Min.(T_{smax})	200°C
-Temperature Min.(t_s)	60~180 seconds
T_{smax} to T_L	
-Ramp-up Rate	3°C/second max.
Time maintained above:	
- Temperature(T_L)	217°C
-Time(T_L)	60~150 seconds
Peak temperature(T_p)	245°C+0/-5°C
Time within 5°C of actual Peak temperature (t_p)	6 seconds max.
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

H. PACKING STANDARD



NOTE:

1. 10 sprocket hole pitch cumulative tolerance ± 0.20 mm.
2. All dimensions meet EIA-481-2-A requirements.
3. Thickness: 0.4 ± 0.05 mm.
4. Component loaded per 13" reel: 600pcs.



NOTE:

1. 600 PCS per box
2. Total 10 boxes per carton
3. Total 6000 PCS carton
4. Volume: $42 \times 35.5 \times 36.5$ cm

