



SPECIFICATION FOR APPROVAL

DESCRIPTION	SMD ELECTRO-MAGNETIC TRANSDUCER
PART NUMBER	BMX-2703-1
CUSTOMER	
DATE	

Originated by	Checked by	Approved by

EL3 Inc.

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BMX-2703-1

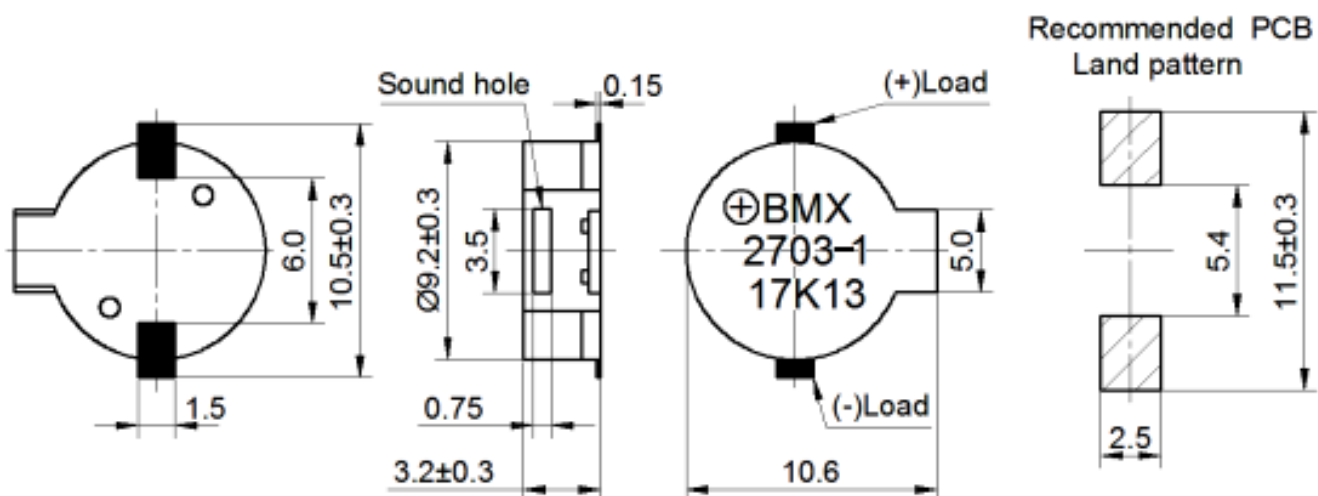
SMD ELECTRO-MAGNETIC TRANSDUCER

No.	Technical terms	Value
1	Rated Voltage (V)	3
2	Operating Voltage (V)	2 ~ 4
3	☆Coil Resistance (Ω)	16 $\pm$ 3
4	Resonant Frequency (Hz)	2,700
5	☆*Sound Output at 10cm (dB)	$\geq$ 95
6	☆*Current Consumption (mA)	$\leq$ 80
7	Operating Temperature ($^{\circ}$ C)	-40 ~ +105
8	Storage Temperature ($^{\circ}$ C)	-40 ~ +120
9	Weight (g)	0.4
10	Case material	LCP
11	RoHS	Yes

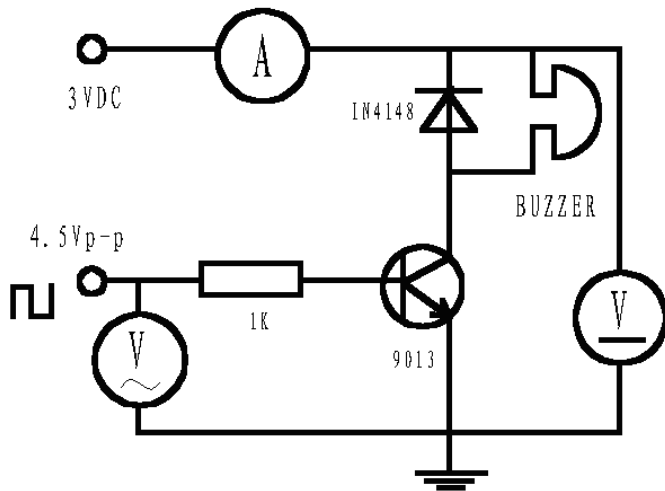
*Applying rated voltage (Resonant frequency, 1/2 duty, Square wave)

☆Test Basic State: Temp ($20 \pm 2^{\circ}$ C), Humidity (40~70%RH), Air pressure (860~1060hPa)

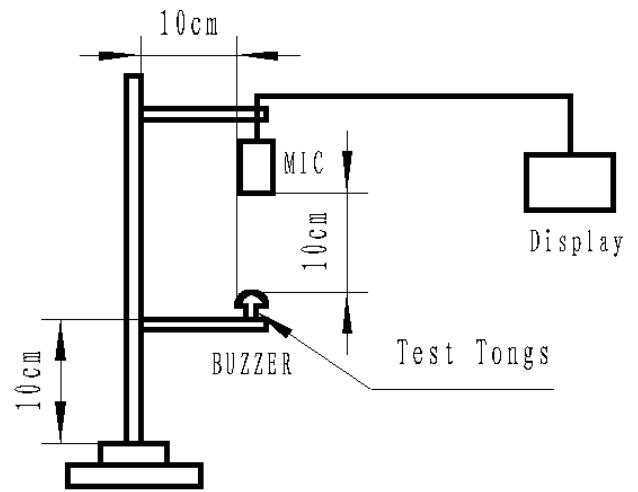
DIMENSION (UNIT: mm) Tolerance: ± 0.5 mm Except Specified



TEST METHOD:

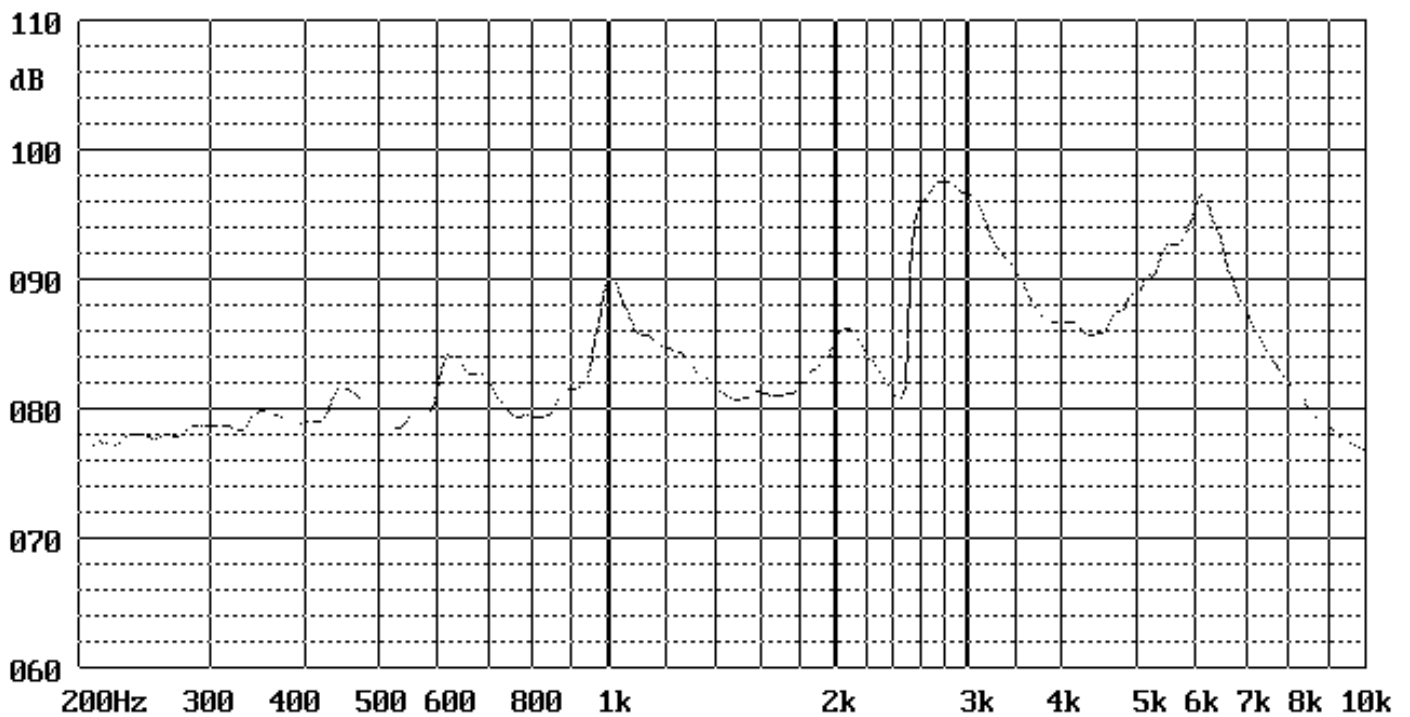


Test Circuit

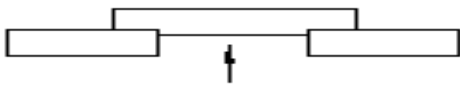


Test Equipments

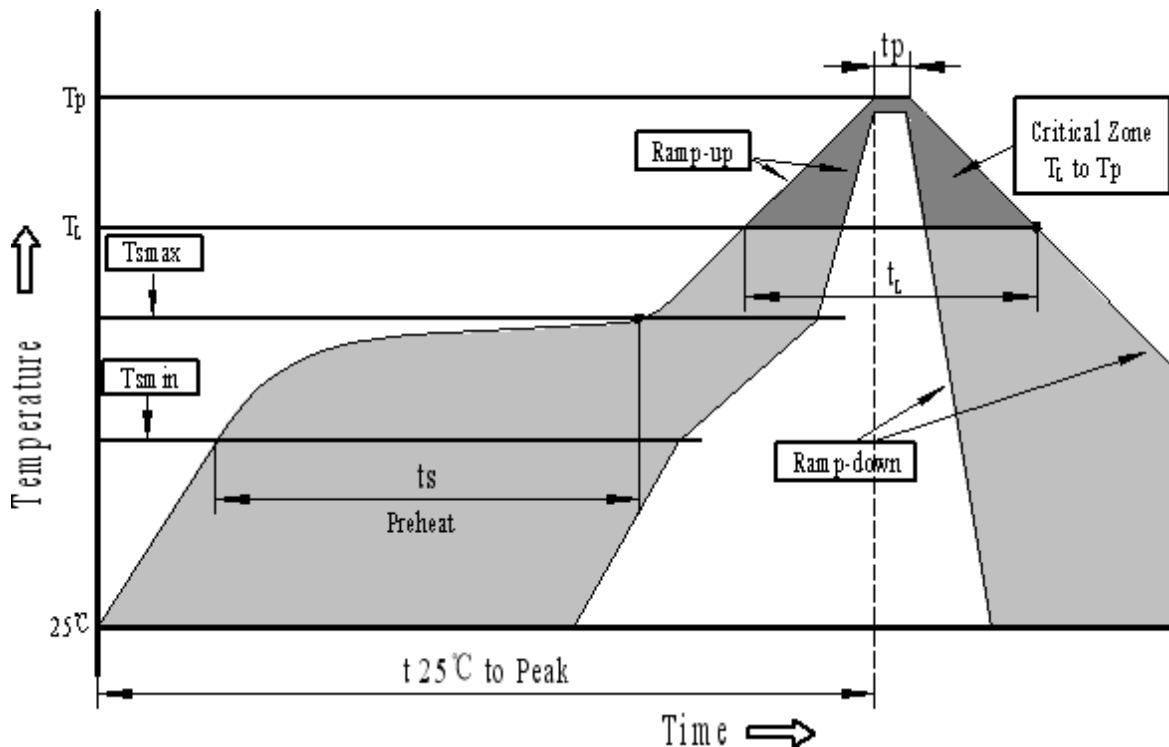
FREQUENCY RESPONSE:



RELIABILITY TEST:

NO.	ITEM	TESTING CONDITION	VARIANCE AFTER TEST
1	High temp. storage life	The part shall be capable of withstanding a storage temperature is +120℃ for 120 hours	After the test the part shall meet specifications without any degradation in appearance and performance except SPL shall be initial value±10dB .(pls do the test after 2 hours when you finish the experiment)
2	Low temp. storage life	The part shall be capable of withstanding a storage temperature is -40℃ for 120 hours	
3	Temp. Cycle	Total 5 cycles, 1 cycle consisting of -40 ±2℃, 30 minutes 20 ±5℃, 15 minutes 120 ±2℃, 30 minutes 20 ±5℃, 15 minutes	
4	Humidity Test	40±2℃, 90 ~ 95% RH, 120 hours	
5	Vibration Test	To-and-fro. sweep time (from 10 to 55 Hz and then 55 to 10Hz) under single amplitude of 1.52mm is 1 minute. 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/s²) for each three mutually perpendicular directions to each of 3 times by half sine wave.	
7	Drop Test	The part only shall be dropped from the height of 70cm onto 10mm thick wooden board each 3 times in 3 axial directions(x,y&z) (a total of 9 times).	
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.			

Recommended Temp. Profile 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.(ts)

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)

250°C + 0 / -5°C

Time within 5°C of actual Peak temperature (tp)

6 seconds max.

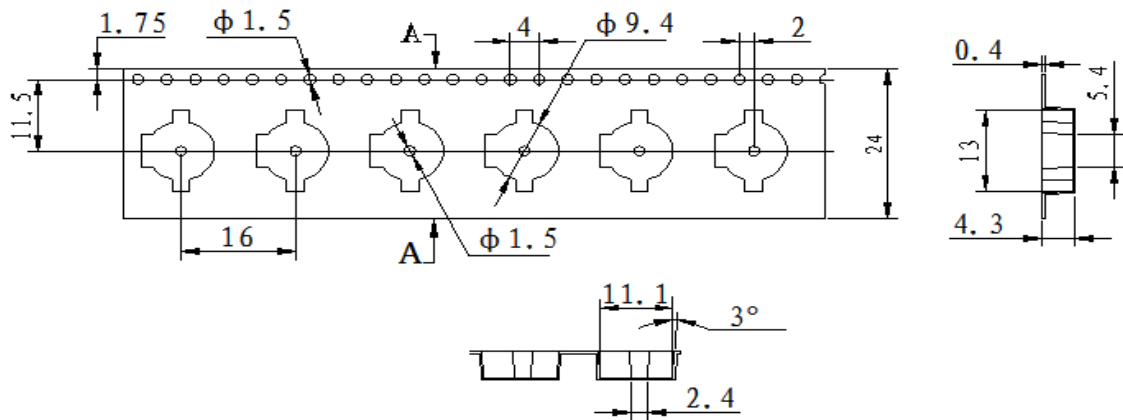
Ramp-down Rate

6°C / second max.

Time 25°C to Peak Temperature

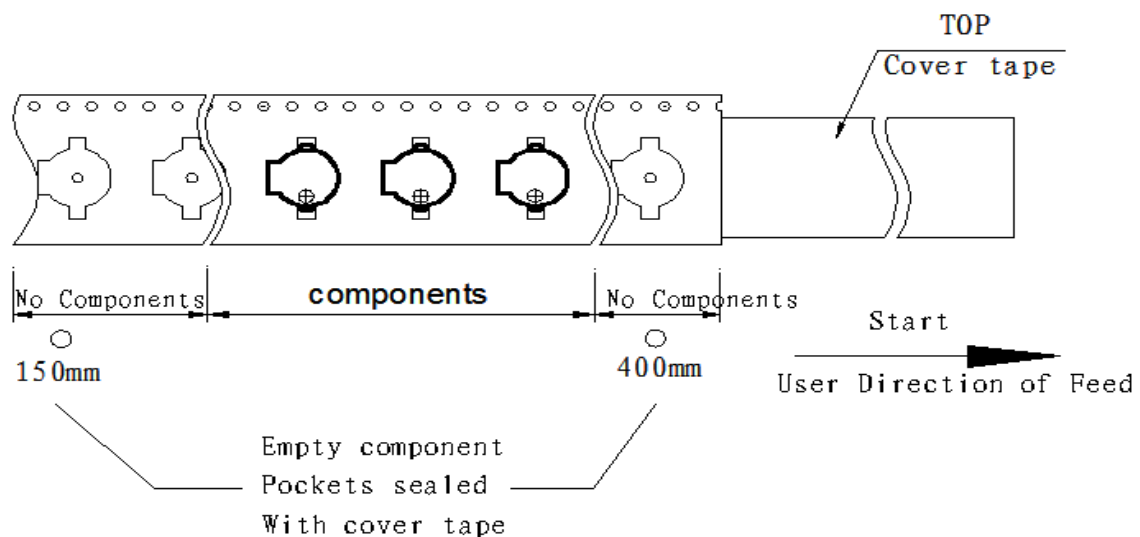
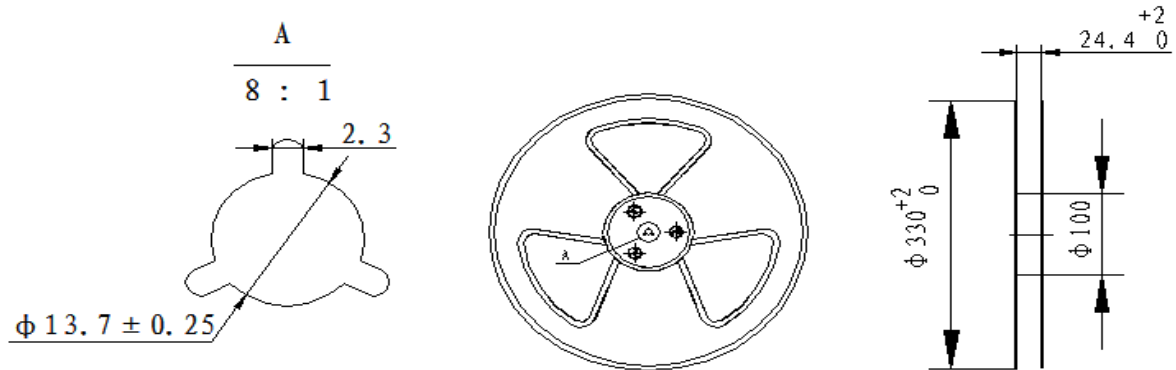
8 minutes max.

PACKING:

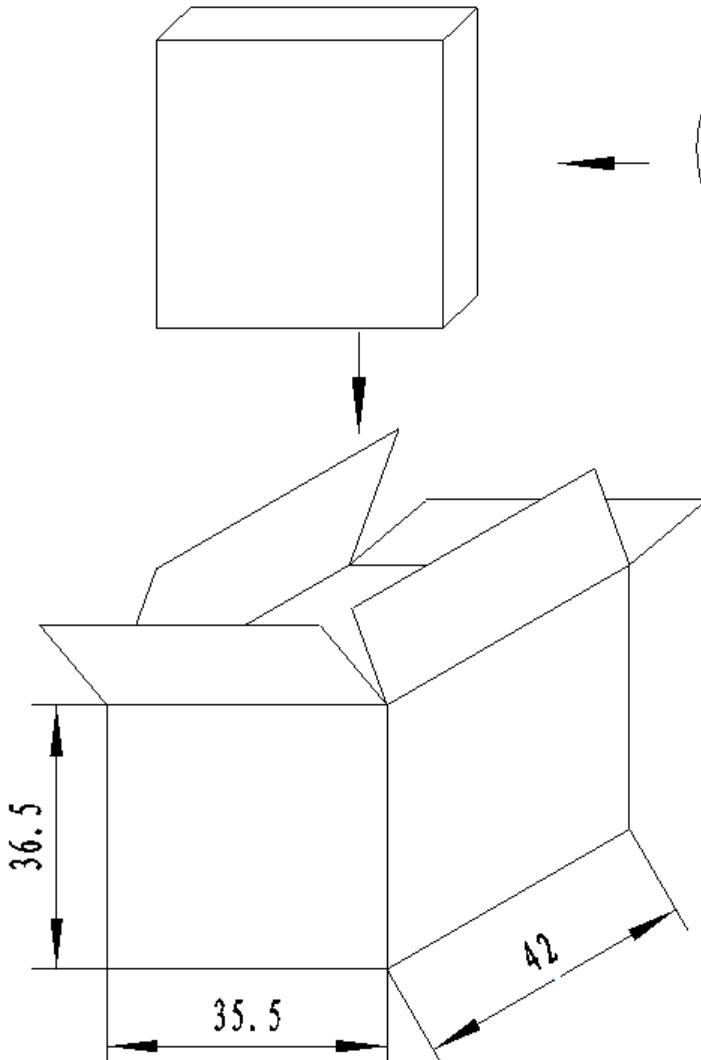


NOTE:

1. 10 sprocket hole pitch cumulative tolerance ± 0.2 mm.
2. All dimensions meet EIA-481-D requirements.
3. Thickness: 0.4 ± 0.05 mm.
4. Component loaded per 13" reel: 1000 pcs.



PACKING:



NOTES:

1. 1,000 PCS per Box
2. 10 Boxes per Carton
3. Total 10,000 pcs Carton