



SPECIFICATION FOR APPROVAL

DESCRIPTION	ELECTRO-MAGNETIC TRANSDUCER
PART NUMBER	BTH-5
CUSTOMER	
DATE	

Originated by	Checked by	Approved by

EL3 Inc.

#517 stx W-Tower, 90, Gyeongin-ro 53-gil, Guro-gu, Seoul 152-865, Republic of Korea

Tel : +82-2-2039-2662 Fax : +82-2-2686-1853

E-Mail : sales@el3.kr <http://www.el3.kr>

BTH-5 ELECTRO-MAGNETIC BUZZER

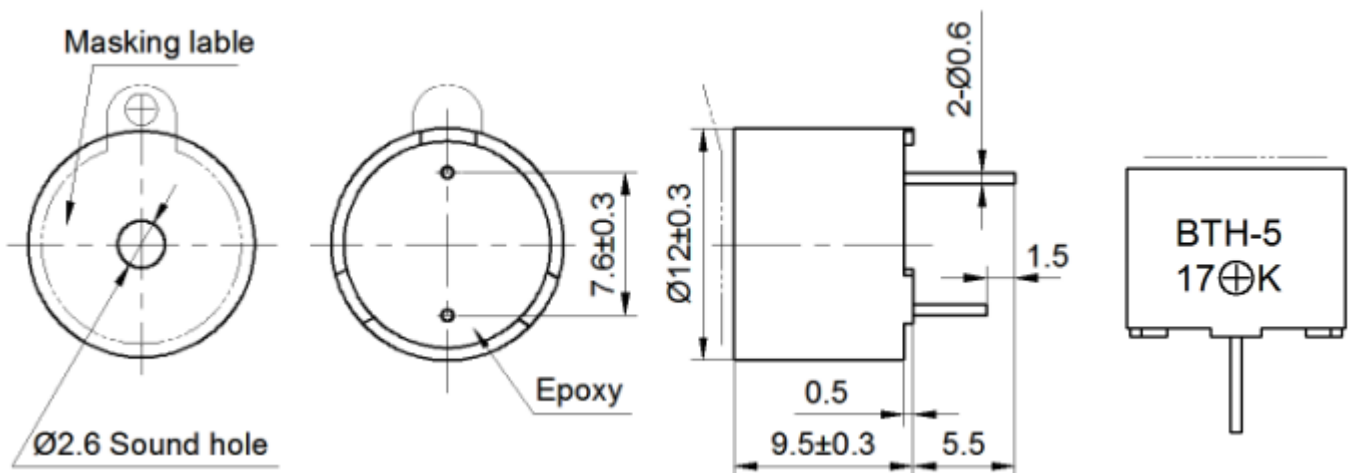
No.	Technical terms	Value
1	Rated Voltage (V _{DC})	5
2	Operating Voltage (V _{DC})	3 ~ 8
3	☆*Current Consumption (mA)	≤30
4	☆*Sound Output at 10cm (dB)	≥88
5	☆*Resonant Frequency (Hz)	2300±300
6	Operating Temperature (°C)	-40 ~ +85
7	Storage Temperature (°C)	-40 ~ +90
8	Weight (g)	2
9	Housing Material	PBT
10	RoHS	Yes

*Value applying at rated voltage.

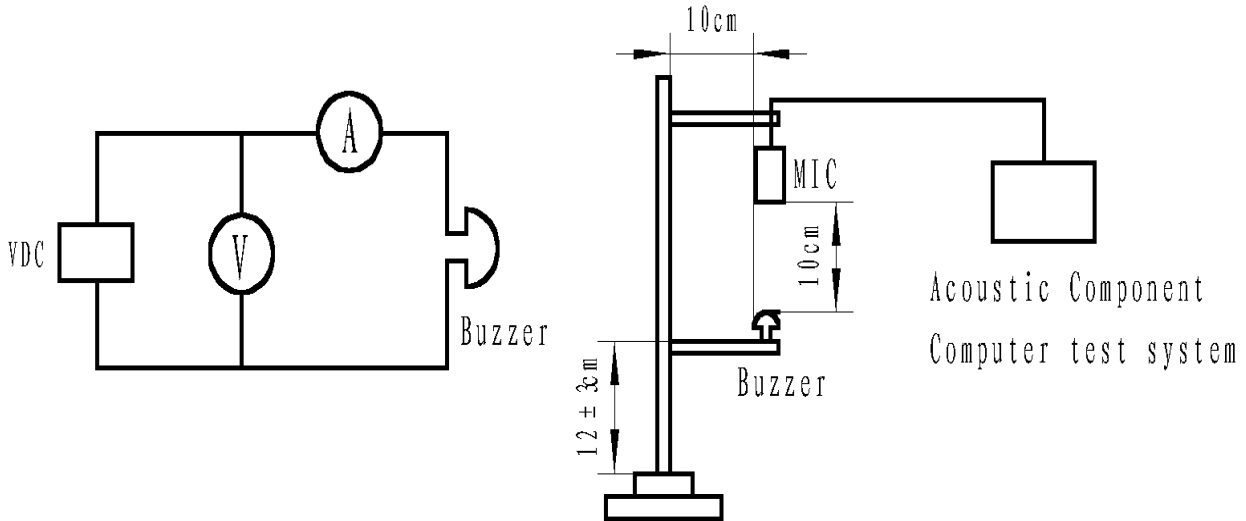
☆Test basic state: Temp(20±2°C) , Humidity(40~70%RH) , Air pressure(860~1060hPa).

DIMENSION (UNIT: mm)

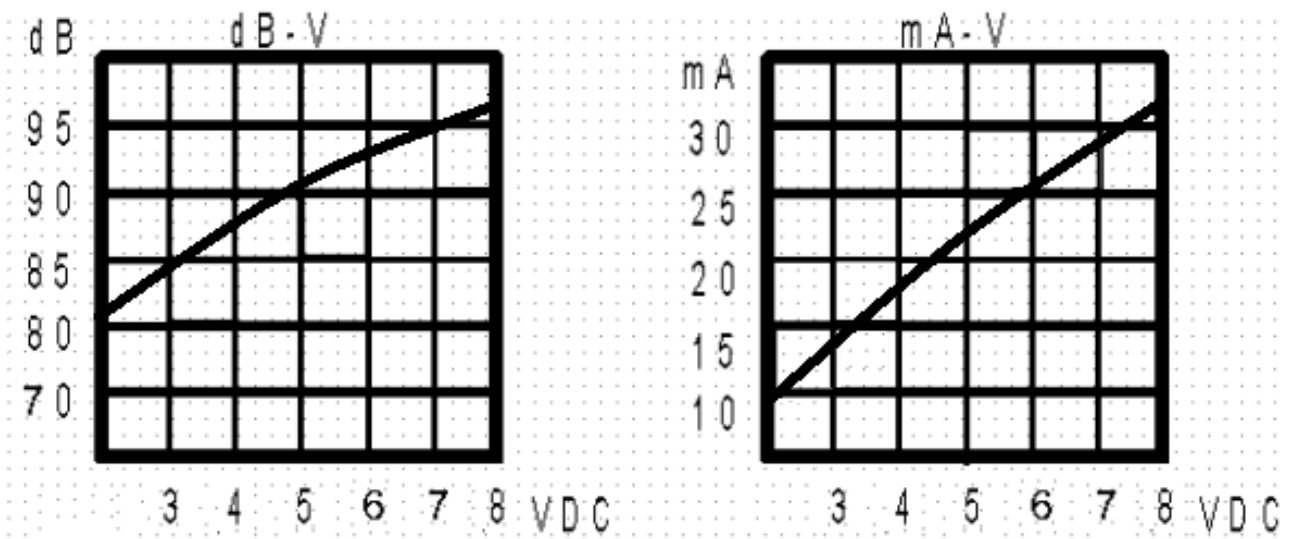
Tolerance: ±0.5mm Except Specified



TEST METHOD:



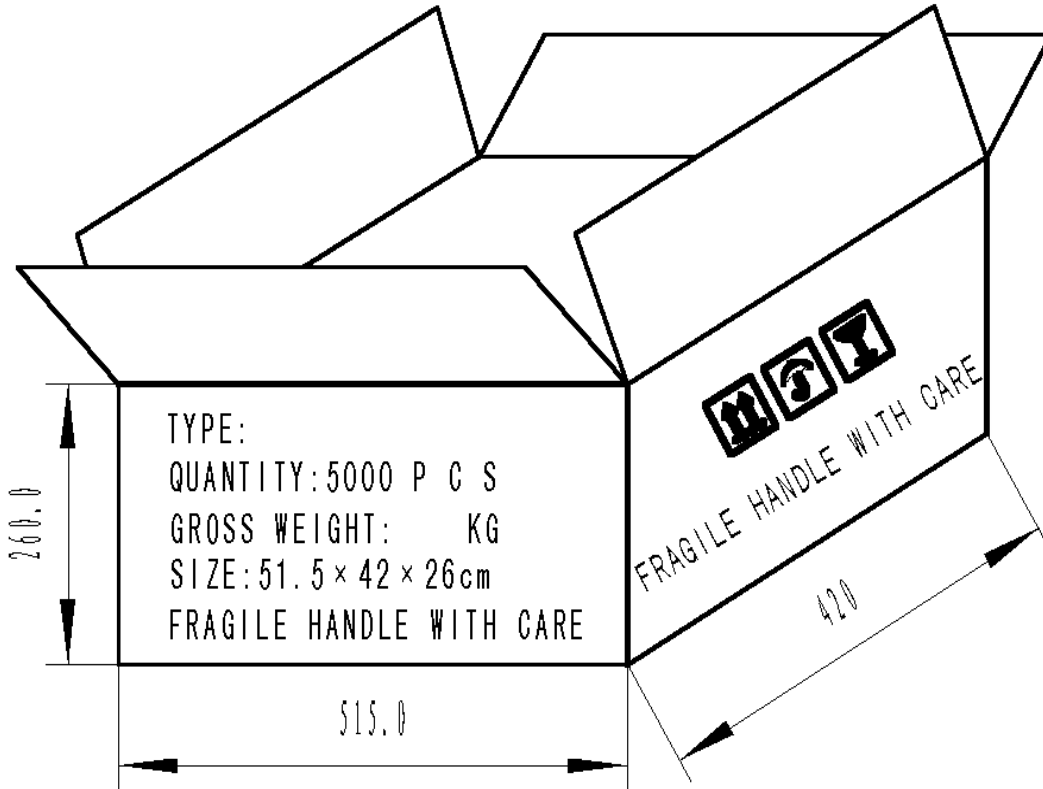
FREQUENCY RESPONSE:



RELIABILITY TEST:

NO.	ITEM	TESTING CONDITION	VARIANCE AFTER TEST
1	Humidity	40±2℃, 90 ~ 95% RH, 96HRS	All specifications must be satisfied after the test.
2	High temp.	+90±2℃, 96HRS	
3	Low temp.	-40±2℃, 96HRS	
4	Temperature Cycling	-40±2℃, 30minutes room temp. 15 minutes +90±2℃, 30 minutes room temp. 15 minutes 5 cycles	
5	Drop test	3 times from height of 70cm onto the surface of 10mm thick wooden board.	
6	Vibration test	Make the test for the directions of X Y and Z (total 0.5 hours). To-and-fro. sweep time (from 10 to 55 Hz and then from 55 to 10 Hz) under single amplitude of 1.0mm is 1 minute.	
7	Solder heat resistance	The part leads (pins) shall be immersed in molten solder maintained at 260±5℃ for a period of 10 seconds. Refer to GB2423.28.	

PACKING:



NOTES:

- 1.100 PCS per Box
- 2.Total 50 Boxes per Carton
- 3.Total 5,000 PCS Carton



SPECIFICATION FOR APPROVAL

DESCRIPTION	ELECTRO-MAGNETIC TRANSDUCER
PART NUMBER	BTH-12
CUSTOMER	
DATE	

Originated by	Checked by	Approved by

EL3 Inc.

#517 stx W-Tower, 90, Gyeongin-ro 53-gil, Guro-gu, Seoul 152-865, Republic of Korea

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BTH-12 ELECTRO-MAGNETIC BUZZER

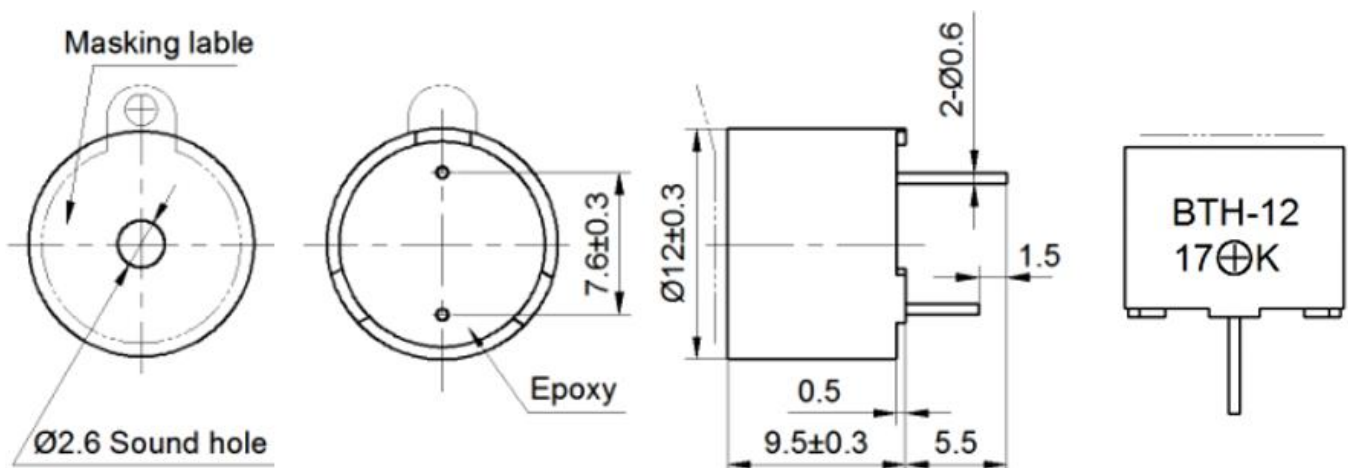
No.	Technical terms	Value
1	Rated Voltage (V _{DC})	12
2	Operating Voltage (V _{DC})	8 ~ 16
3	☆*Current Consumption (mA)	≤30
4	☆*Sound Output at 10cm (dB)	≥88
5	☆*Resonant Frequency (Hz)	2300±300
6	Operating Temperature (°C)	-40 ~ +85
7	Storage Temperature (°C)	-40 ~ +90
8	Weight (g)	2
9	Housing Material	PBT
10	RoHS	Yes

*Value applying at rated voltage.

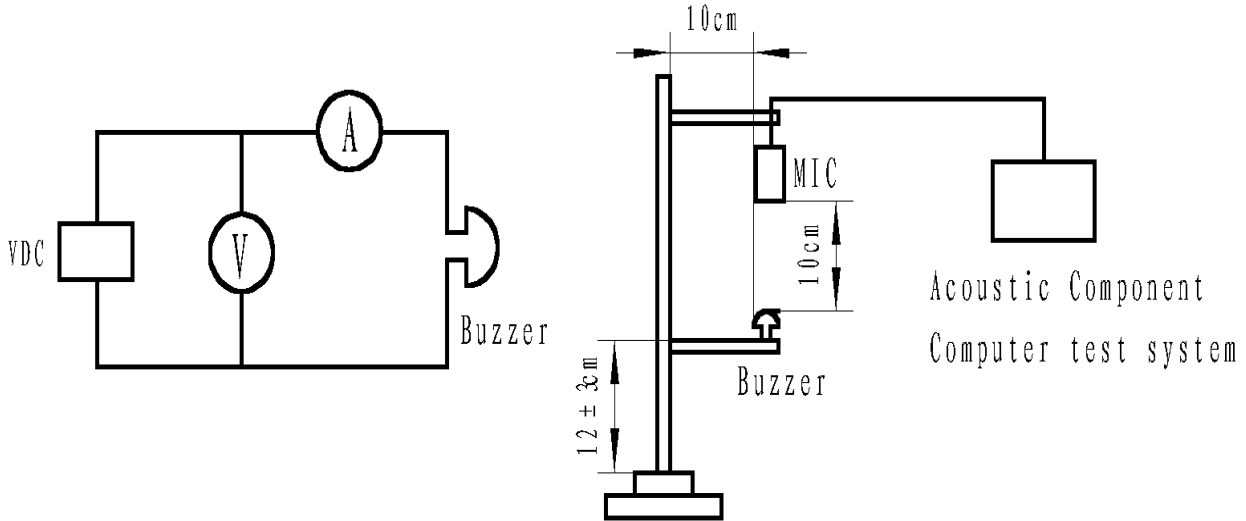
☆Test basic state: Temp(20±2°C) , Humidity(40~70%RH) , Air pressure(860~1060hPa).

DIMENSION (UNIT: mm)

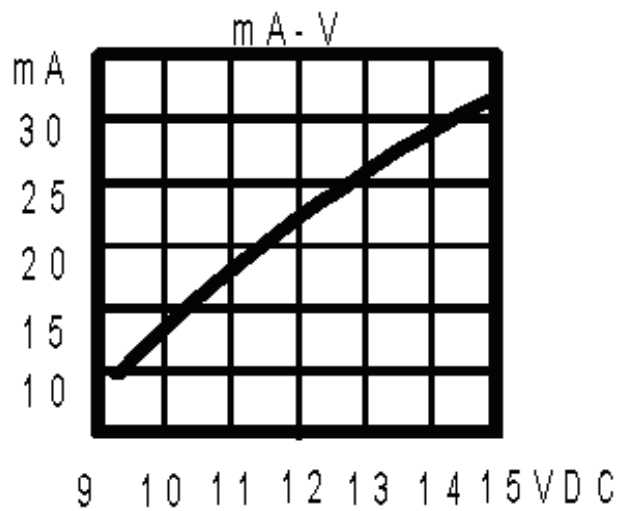
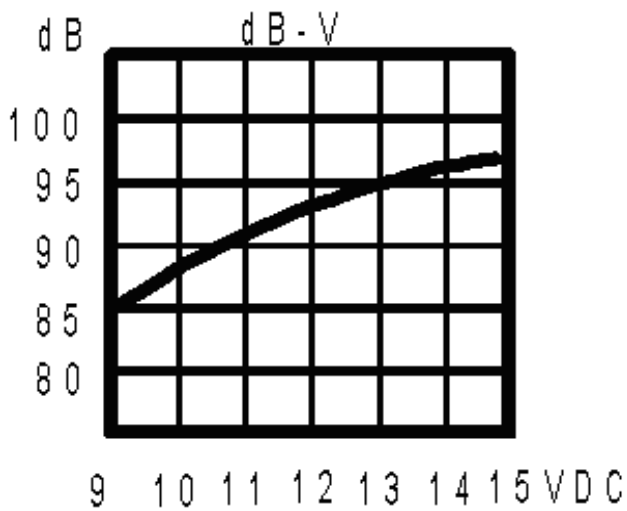
Tolerance: ±0.5mm Except Specified



TEST METHOD:



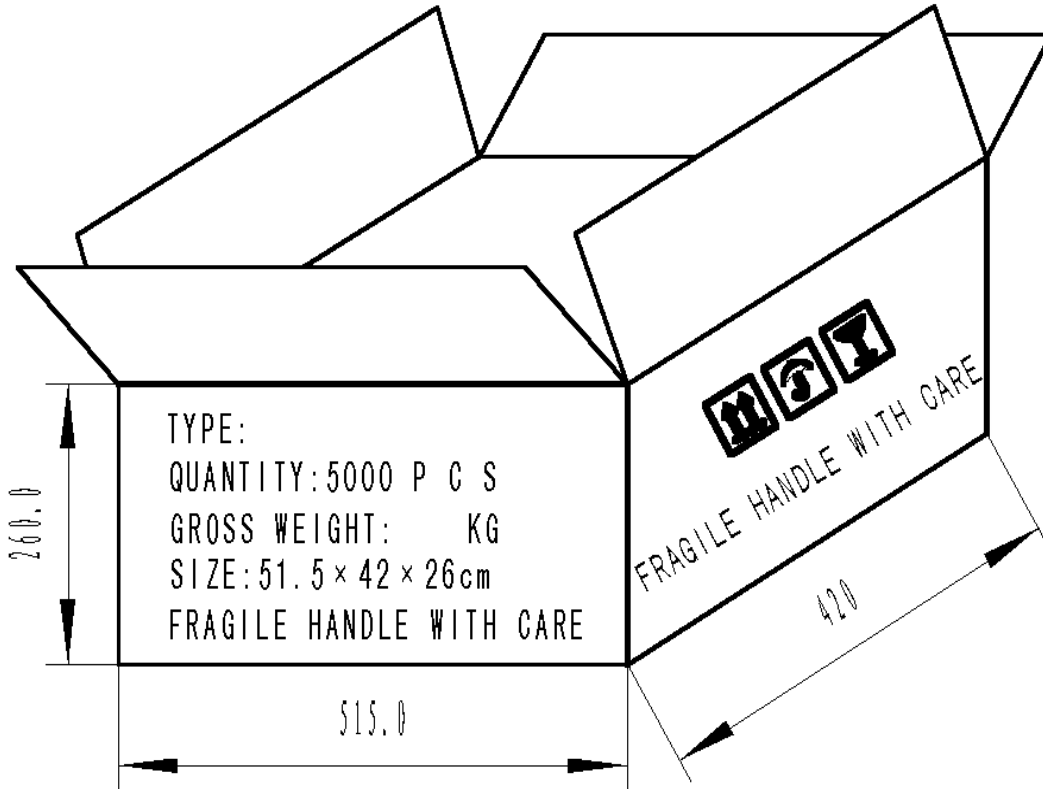
FREQUENCY RESPONSE:



RELIABILITY TEST:

NO.	ITEM	TESTING CONDITION	VARIANCE AFTER TEST
1	Humidity	40±2°C, 90 ~ 95% RH, 96HRS	All specifications must be satisfied after the test.
2	High temp	+90±2°C, 96HRS	
3	Low temp	-40±2°C, 96HRS	
4	Temperature Cycling	-40±2°C, 30minutes room temp. 15 minutes +90±2°C, 30 minutes room temp. 15 minutes 5 cycles	
5	Drop test	3 times from height of 70cm onto the surface of 10mm thick wooden board.	
6	Vibration test	Make the test for the directions of X Y and Z (total 0.5 hours). To-and-fro. sweep time (from 10 to 55 Hz and then from 55 to 10 Hz) under single amplitude of 1.0mm is 1 minute.	
7	Solder heat resistance	The part leads (pins) shall be immersed in molten solder maintained at 260±5°C for a period of 10 seconds.Refer to GB2423.28.	After the test part shall meet specifications without any degradation in appearance and performance.

PACKING:



NOTES:

- 1.100 PCS per Box
- 2.Total 50 Boxes per Carton
- 3.Total 5,000 PCS Carton