

# GREEN ELECTRONICS CO., LTD.

## GEC09B-5

### FEATURES:

Case: Noryl, Black

Pin: Tin-plated copper

### SPECIFICATIONS:

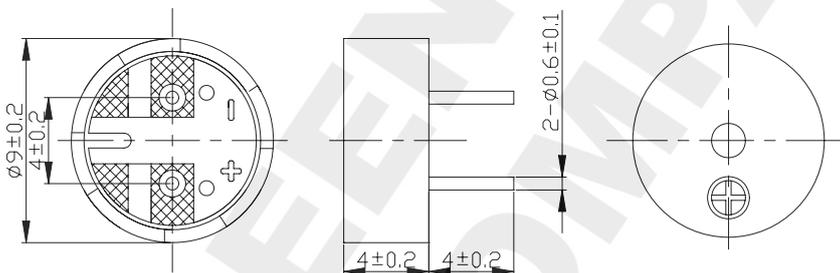
TYPE	UNIT	GEC09B-1
◆ Min. Sound Output at 10cm	dB	85
Rated Voltage	V <sub>0-p</sub>	1.5
Operating Voltage	V <sub>0-p</sub>	1~2
Resonant Frequency	Hz	2730
◆ Max. Current Consumption	mA	80
Coil Resistance	Ω	6 ± 1
◇ Coil Impedance	Ω	15
Operating Temperature	°C	-20 ~ +70
Storage Temperature	°C	-30 ~ +80
Weight	g	0.7

◆ Value applying at (rated voltage, 2730 Hz, 1/2 duty square wave)

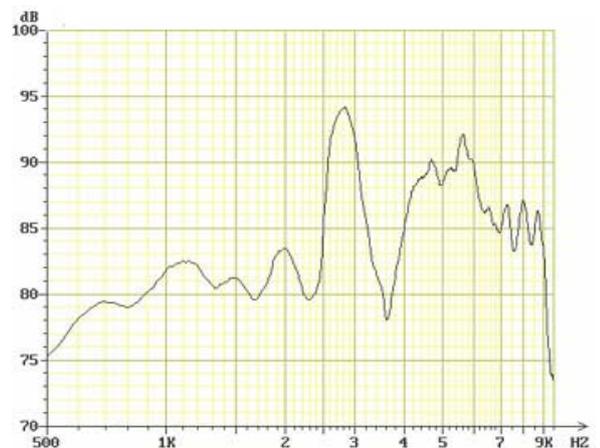
◇ Value applying at (2730 Hz, sine wave, measuring current 60μA)

### DIMENSIONS :

(Unit: mm)



### FREQUENCY RESPONSE:



Address: 3527.GA-DONG CHUNGGANG COMOLEX1258, GURO DONG  
SEOUL, KOREA

Tel: 82.2.6679.8796

Fax: 82.2.6679.7662

Web site: [WWW.GREENELEC.CO.KR](http://WWW.GREENELEC.CO.KR)

# ***SPECIFICATION SHEET***

***CUSTOMER:***

***PRODUCT:*** ELECTROMAGNETIC TRANSDUCER

***MODEL NUMBER:*** G09B-5

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***GREEN***

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***ELECTRONICS CO., LTD.***

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WE HERE APPLY FOR AUTHORIZATION TO SUPPLY THE ABOVE MENTIONED ON THE BASIS OF THE FOLLOWING SPECIFICATIONS.

1. SCOPE

THESE SPECIFICATIONS APPLIED TO THE ABOVE MENTIONED ELECTROMAGNETIC TRANSDUCER.

2. MECHANICAL CHARACTERISTICS

2-1 EXTERNAL DIMENSION

THE EXTERNAL DIMENSION, INDICATION ARE AS SHOWN IN DRAWING SHEETS.

2-2 APPEARANCE

THE FINISHING SHALL NOT BE ACCOMPANIED BY REMARKABLE RUST, DISTORTION, CREAK, ETC.

2-3 TENSILE STRENGTH OF TERMINAL PINS

EACH TERMINAL PIN SHALL BE NO ABNORMALITY WHEN THE EQUIPMENT IS PROPERLY FIXED AND 1kg OF LOAD IS GIVEN FOR  $30 \pm 5$  SECONDS IN AXIS DIRECTION OF TERMINAL.

3. ELECTRICAL CHARACTERISTICS (AT 25°C)

3-1 OPERATING VOLTAGE	: 1-2V
3-2 RATED VOLTAGE	: 1.5V
3-3 RESONANT FREQUENCY	: 2730 Hz
3-4 RATED CURRENT	: 80mA MAX.
3-5 SOUND PRESSURE LEVEL	: 85dB MIN.
3-6 COIL RESISTANCE	: $6 \pm 1$ OHM
3-7 COIL IMPEDANCE	: 15 OHM
3-8 OPERATING TEMPERATURE	: -20°C- +70°C
3-9 STORAGE TEMPERATURE	: -30°C- +80°C

DATE: 2008. 1. 11	PRODUCT SPECIFICATION G09B-1 (ELECTROMAGNETIC TRANSDUCER)	CUSTOMER:
PAGE: 1/5		PRODUCER:

#### 4. RELIABILITY TEST

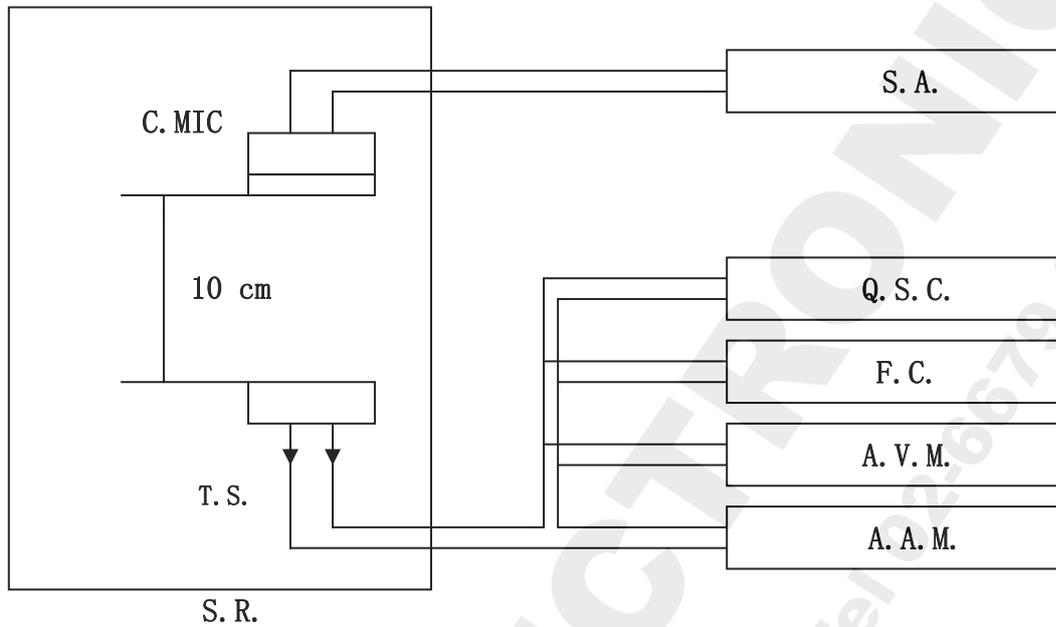
NO.	ITEM	TESTING CONDITION	VARIANCE AFTER TEST
4-1	HUMIDITY	55 ± 5°C, 95 ± 3%RH 96HRS	SOUND PRESSURE LEVEL INITIAL VALUE ± 10%
4-2	HIGH TEMP.	+80 ± 2°C, 96HRS	
4-3	LOW TEMP.	-30 ± 2°C, 96HRS	
4-4	TEMPERATURE CYCLING	-30 ± 2°C      30 MINUTES	
		ROOM TEMP.      10 MINUTES	
		+80 ± 2°C      30 MINUTES	
		ROOM TEMP.      10 MINUTES	
		5 CYCLES	
4-5	DROP TEST	3 TIMES FROM HEIGHT OF 50CM ON CONCRETE FLOOR	

**NOTE:**

1. TEST ITEM 4-4 AND 4-5 SHALL BE CONDUCTED WITH CIRCUIT STATE.
2. TEST SPECIMENS SHALL BE KEPT FOR 4 HRS, 25°C BEFORE MEASUREMENT.

DATE: 2008. 1. 11	PRODUCT SPECIFICATION G09B-1 (ELECTROMAGNETIC TRANSDUCER)	CUSTOMER:
PAGE: 2/5		PRODUCER:

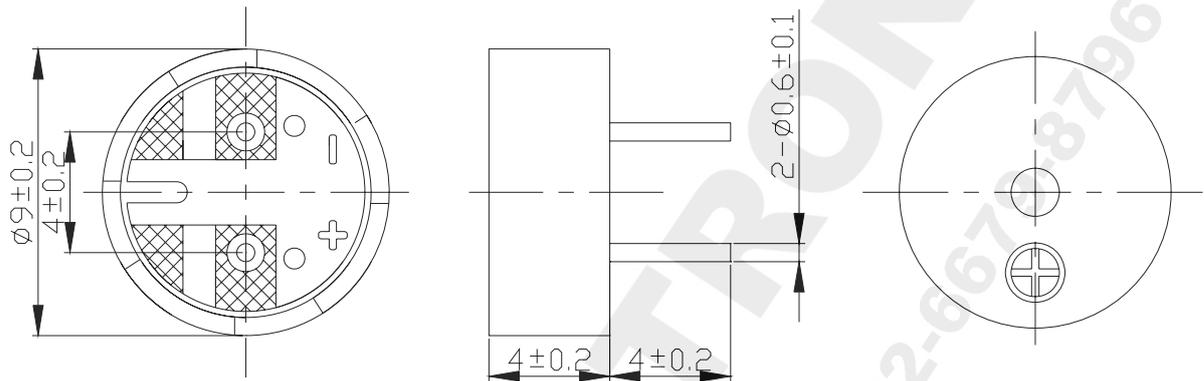
## 5. ELECTRICAL CHARACTERISTICS TEST METHOD



S. A. : SPECTRUM ANALYAER  
 F. C. : FREQUENCY COUNTER  
 A. A. M. : AC AMPERE METER  
 S. R. : SOUNDPROOF ROOM  
 A. V. M. : AC VOLT. METER  
 C. MIC : CONDENSER MIC  
 T. S. : TEST SAMPLE  
 Q. S. C. : OSCILLATOR

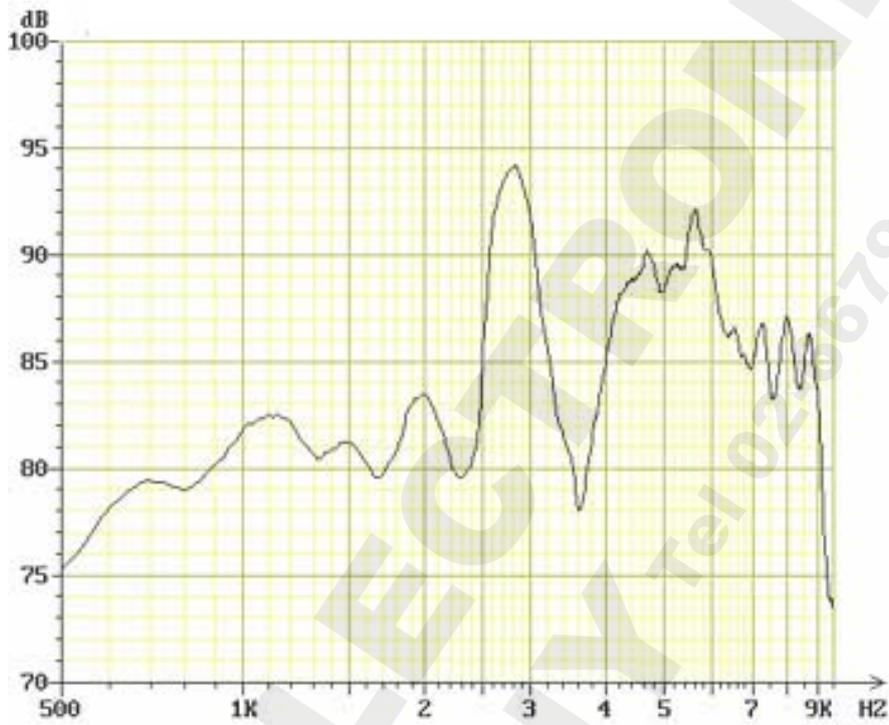
DATE: 2008. 1. 11	PRODUCT SPECIFICATION G09B-1	CUSTOMER:
PAGE: 3/5	(ELECTROMAGNETIC TRANSDUCER)	PRODUCER:

6. DIMENSION (UNIT: mm)



DATE: 2008. 1. 11	PRODUCT SPECIFICATION G09B-1 (ELECTROMAGNETIC TRANSDUCER)	CUSTOMER:
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7. FREQUENCY RESPONSE (typical curve of type XCMT09B2701P)



DATE: 2008. 1. 11	PRODUCT SPECIFICATION G09B-1 (ELECTROMAGNETIC TRANSDUCER)	CUSTOMER:
PAGE: 5/5		PRODUCER:



# GREEN ELECTRONICS CO., LTD.

## GEC09B-3

### FEATURES:

Case: Noryl, Black

Pin: Tin-plated copper

### SPECIFICATIONS:

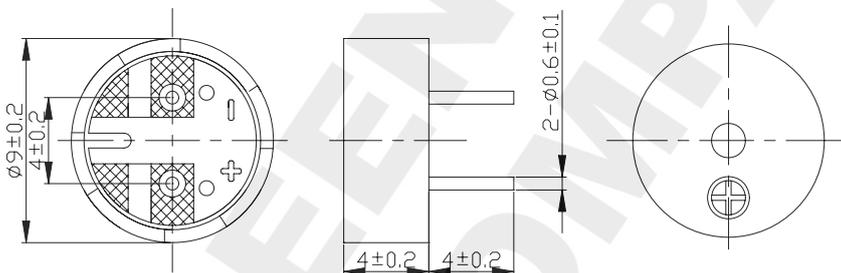
TYPE	UNIT	GEC09B-1
◆ Min. Sound Output at 10cm	dB	85
Rated Voltage	V <sub>0-p</sub>	3
Operating Voltage	V <sub>0-p</sub>	2~5
Resonant Frequency	Hz	2730
◆ Max. Current Consumption	mA	80
Coil Resistance	Ω	6 ± 1
◇ Coil Impedance	Ω	15
Operating Temperature	°C	-20 ~ +70
Storage Temperature	°C	-30 ~ +80
Weight	g	0.7

◆ Value applying at (rated voltage, 2730 Hz, 1/2 duty square wave)

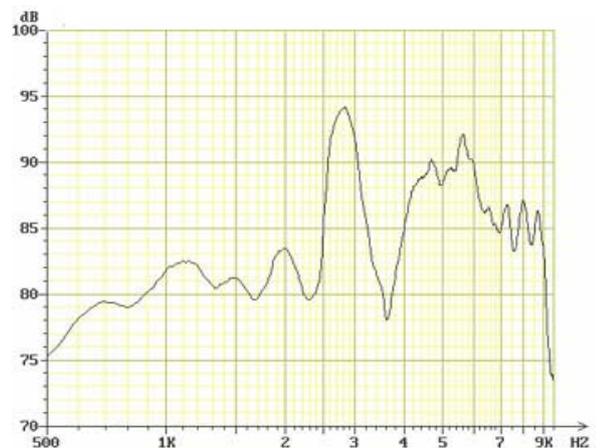
◇ Value applying at (2730 Hz, sine wave, measuring current 60μA)

### DIMENSIONS :

(Unit: mm)



### FREQUENCY RESPONSE:



Address: 3527.GA-DONG CHUNGGANG COMOLEX1258, GURO DONG  
SEOUL, KOREA

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# ***SPECIFICATION SHEET***

***CUSTOMER:***

***PRODUCT:*** ELECTROMAGNETIC TRANSDUCER

***MODEL NUMBER:*** G09B-3

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***GREEN***

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WE HERE APPLY FOR AUTHORIZATION TO SUPPLY THE ABOVE MENTIONED ON THE BASIS OF THE FOLLOWING SPECIFICATIONS.

1. SCOPE

THESE SPECIFICATIONS APPLIED TO THE ABOVE MENTIONED ELECTROMAGNETIC TRANSDUCER.

2. MECHANICAL CHARACTERISTICS

2-1 EXTERNAL DIMENSION

THE EXTERNAL DIMENSION, INDICATION ARE AS SHOWN IN DRAWING SHEETS.

2-2 APPEARANCE

THE FINISHING SHALL NOT BE ACCOMPANIED BY REMARKABLE RUST, DISTORTION, CREAK, ETC.

2-3 TENSILE STRENGTH OF TERMINAL PINS

EACH TERMINAL PIN SHALL BE NO ABNORMALITY WHEN THE EQUIPMENT IS PROPERLY FIXED AND 1kg OF LOAD IS GIVEN FOR  $30 \pm 5$  SECONDS IN AXIS DIRECTION OF TERMINAL.

3. ELECTRICAL CHARACTERISTICS (AT 25°C)

3-1 OPERATING VOLTAGE	: 2-5V
3-2 RATED VOLTAGE	: 3V
3-3 RESONANT FREQUENCY	: 2730 Hz
3-4 RATED CURRENT	: 80mA MAX.
3-5 SOUND PRESSURE LEVEL	: 85dB MIN.
3-6 COIL RESISTANCE	: $6 \pm 1$ OHM
3-7 COIL IMPEDANCE	: 15 OHM
3-8 OPERATING TEMPERATURE	: -20°C- +70°C
3-9 STORAGE TEMPERATURE	: -30°C- +80°C

DATE: 2004. 1. 11	PRODUCT SPECIFICATION G09B-3 (ELECTROMAGNETIC TRANSDUCER)	CUSTOMER:
PAGE: 1/5		PRODUCER:

#### 4. RELIABILITY TEST

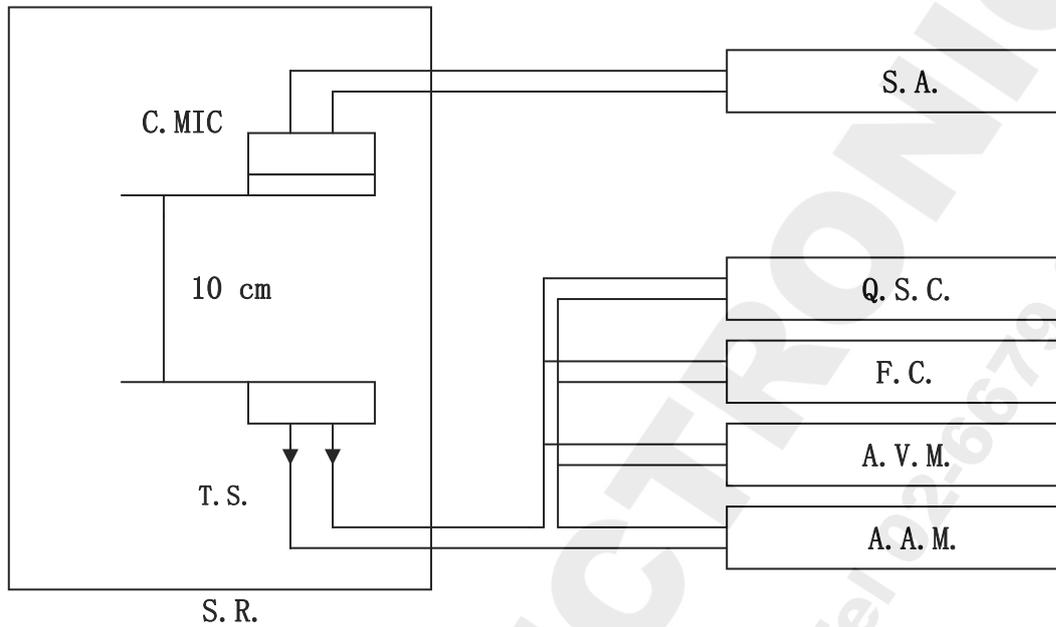
NO.	ITEM	TESTING CONDITION	VARIANCE AFTER TEST
4-1	HUMIDITY	55 ± 5°C, 95 ± 3%RH 96HRS	SOUND PRESSURE LEVEL INITIAL VALUE ± 10%
4-2	HIGH TEMP.	+80 ± 2°C, 96HRS	
4-3	LOW TEMP.	-30 ± 2°C, 96HRS	
4-4	TEMPERATURE CYCLING	-30 ± 2°C      30 MINUTES	
		ROOM TEMP.      10 MINUTES	
		+80 ± 2°C      30 MINUTES	
		ROOM TEMP.      10 MINUTES	
		5 CYCLES	
4-5	DROP TEST	3 TIMES FROM HEIGHT OF 50CM ON CONCRETE FLOOR	

NOTE:

1. TEST ITEM 4-4 AND 4-5 SHALL BE CONDUCTED WITH CIRCUIT STATE.
2. TEST SPECIMENS SHALL BE KEPT FOR 4 HRS, 25°C BEFORE MEASUREMENT.

DATE: 2004. 1. 11	PRODUCT SPECIFICATION G09B-3	CUSTOMER:
PAGE: 2/5	(ELECTROMAGNETIC TRANSDUCER)	PRODUCER:

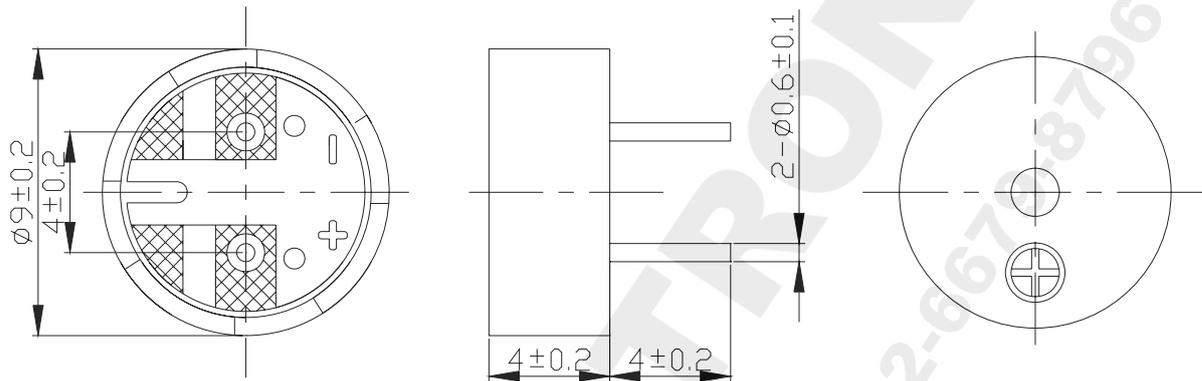
5. ELECTRICAL CHARACTERISTICS TEST METHOD



- S. A. : SPECTRUM ANALYAER
- F. C. : FREQUENCY COUNTER
- A. A. M. : AC AMPERE METER
- S. R. : SOUNDPROOF ROOM
- A. V. M. : AC VOLT. METER
- C. MIC : CONDENSER MIC
- T. S. : TEST SAMPLE
- Q. S. C. : OSCILLATOR

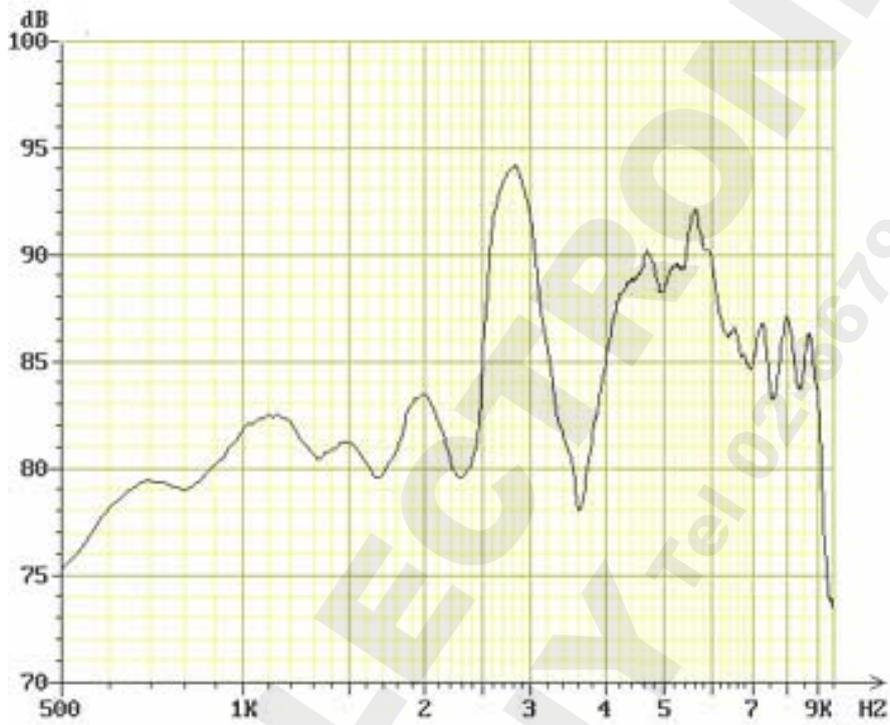
DATE: 2004. 1. 11	PRODUCT SPECIFICATION G09B-3	CUSTOMER:
PAGE: 3/5	(ELECTROMAGNETIC TRANSDUCER)	PRODUCER:

6. DIMENSION (UNIT: mm)



DATE: 2004. 1. 11	PRODUCT SPECIFICATION G09B-3 (ELECTROMAGNETIC TRANSDUCER)	CUSTOMER:
PAGE: 4/5		PRODUCER:

7. FREQUENCY RESPONSE (typical curve of type XCMT09B2701P)



DATE: 2004. 1. 11

PAGE: 5/5

PRODUCT SPECIFICATION  
G09B-3  
(ELECTROMAGNETIC TRANSDUCER)

CUSTOMER:

PRODUCER:



# GREEN ELECTRONICS CO., LTD.

## GEC09B-5

### FEATURES:

Case: Noryl, Black

Pin: Tin-plated copper

### SPECIFICATIONS:

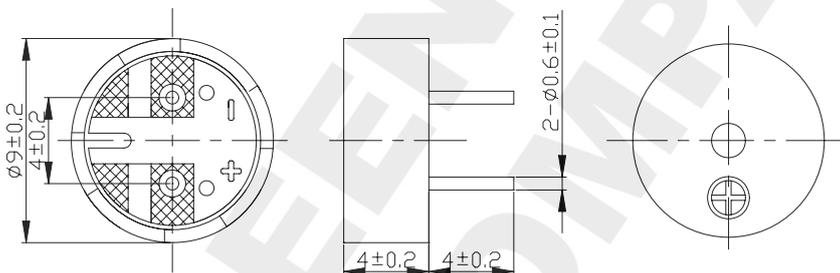
TYPE	UNIT	GEC09B-5
◆ Min. Sound Output at 10cm	dB	85
Rated Voltage	V <sub>0-p</sub>	5
Operating Voltage	V <sub>0-p</sub>	3~6
Resonant Frequency	Hz	2730
◆ Max. Current Consumption	mA	80
Coil Resistance	Ω	6 ± 1
◇ Coil Impedance	Ω	15
Operating Temperature	°C	-20 ~ +70
Storage Temperature	°C	-30 ~ +80
Weight	g	0.7

◆ Value applying at (rated voltage, 2730 Hz, 1/2 duty square wave)

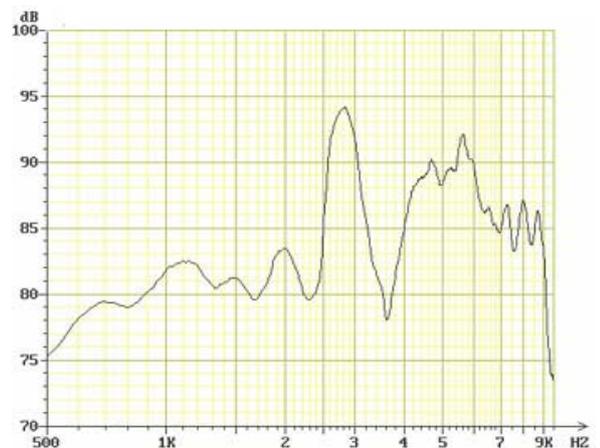
◇ Value applying at (2730 Hz, sine wave, measuring current 60μA)

### DIMENSIONS :

(Unit: mm)



### FREQUENCY RESPONSE:



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***MODEL NUMBER:*** G09B-5

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1. SCOPE

THESE SPECIFICATIONS APPLIED TO THE ABOVE MENTIONED ELECTROMAGNETIC TRANSDUCER.

2. MECHANICAL CHARACTERISTICS

2-1 EXTERNAL DIMENSION

THE EXTERNAL DIMENSION, INDICATION ARE AS SHOWN IN DRAWING SHEETS.

2-2 APPEARANCE

THE FINISHING SHALL NOT BE ACCOMPANIED BY REMARKABLE RUST, DISTORTION, CREAK, ETC.

2-3 TENSILE STRENGTH OF TERMINAL PINS

EACH TERMINAL PIN SHALL BE NO ABNORMALITY WHEN THE EQUIPMENT IS PROPERLY FIXED AND 1kg OF LOAD IS GIVEN FOR  $30 \pm 5$  SECONDS IN AXIS DIRECTION OF TERMINAL.

3. ELECTRICAL CHARACTERISTICS (AT 25°C)

3-1 OPERATING VOLTAGE	:	3-6V
3-2 RATED VOLTAGE	:	5V
3-3 RESONANT FREQUENCY	:	2730 Hz
3-4 RATED CURRENT	:	80mA MAX.
3-5 SOUND PRESSURE LEVEL	:	85dB MIN.
3-6 COIL RESISTANCE	:	$6 \pm 1$ OHM
3-7 COIL IMPEDANCE	:	15 OHM
3-8 OPERATING TEMPERATURE	:	-20°C- +70°C
3-9 STORAGE TEMPERATURE	:	-30°C- +80°C

DATE: 2004. 1. 11	PRODUCT SPECIFICATION G09B-5 (ELECTROMAGNETIC TRANSDUCER)	CUSTOMER:
PAGE: 1/5		PRODUCER:

#### 4. RELIABILITY TEST

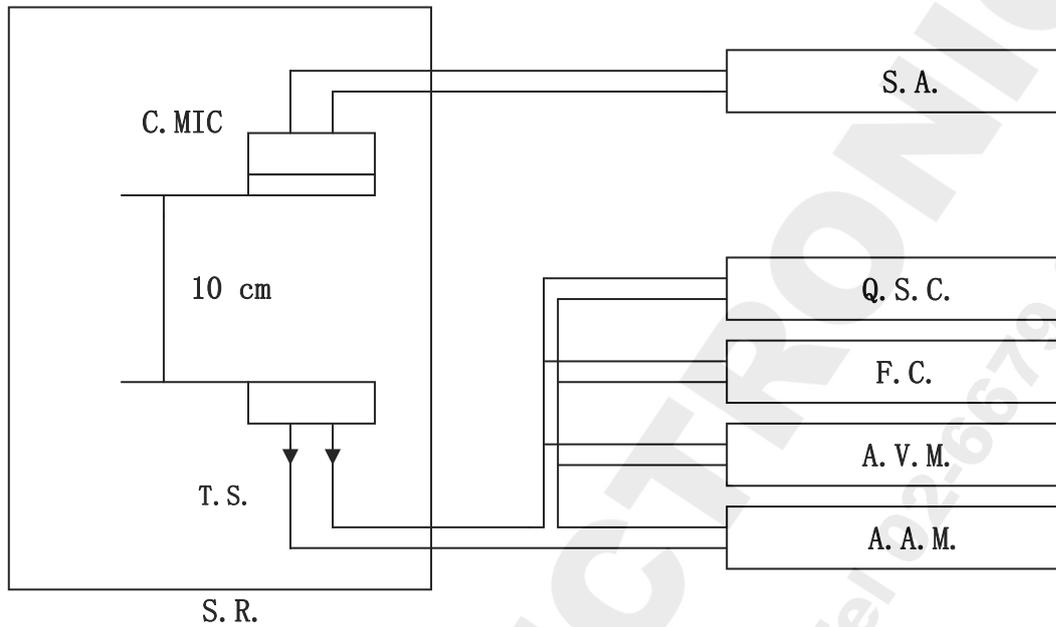
NO.	ITEM	TESTING CONDITION	VARIANCE AFTER TEST
4-1	HUMIDITY	55 ± 5°C, 95 ± 3%RH 96HRS	SOUND PRESSURE LEVEL INITIAL VALUE ± 10%
4-2	HIGH TEMP.	+80 ± 2°C, 96HRS	
4-3	LOW TEMP.	-30 ± 2°C, 96HRS	
4-4	TEMPERATURE CYCLING	-30 ± 2°C      30 MINUTES	
		ROOM TEMP.      10 MINUTES	
		+80 ± 2°C      30 MINUTES	
		ROOM TEMP.      10 MINUTES	
		5 CYCLES	
4-5	DROP TEST	3 TIMES FROM HEIGHT OF 50CM ON CONCRETE FLOOR	

NOTE:

1. TEST ITEM 4-4 AND 4-5 SHALL BE CONDUCTED WITH CIRCUIT STATE.
2. TEST SPECIMENS SHALL BE KEPT FOR 4 HRS, 25°C BEFORE MEASUREMENT.

DATE: 2004. 1. 11	PRODUCT SPECIFICATION G09B-5 (ELECTROMAGNETIC TRANSDUCER)	CUSTOMER:
PAGE: 2/5		PRODUCER:

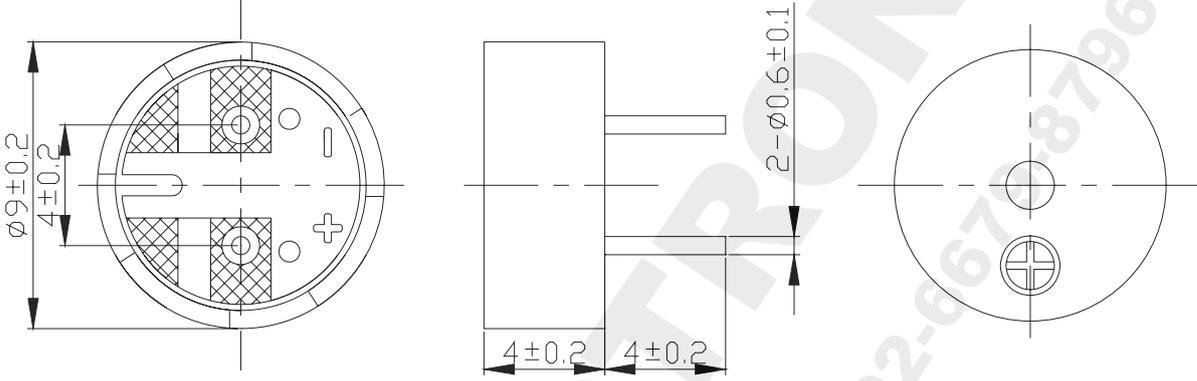
5. ELECTRICAL CHARACTERISTICS TEST METHOD



- S. A. : SPECTRUM ANALYAER
- F. C. : FREQUENCY COUNTER
- A. A. M. : AC AMPERE METER
- S. R. : SOUNDPROOF ROOM
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- C. MIC : CONDENSER MIC
- T. S. : TEST SAMPLE
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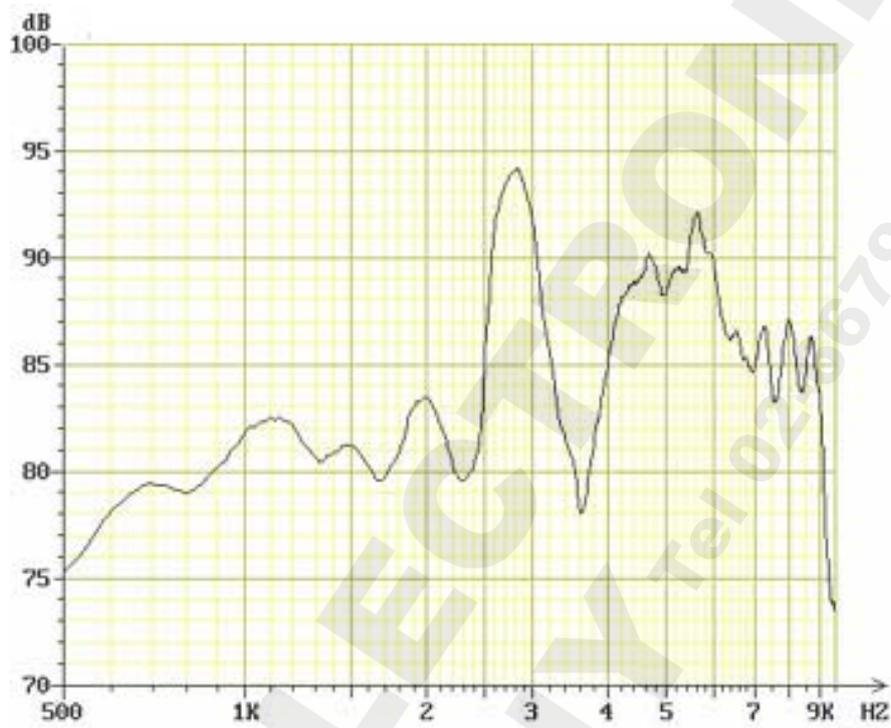
DATE: 2004. 1. 11	PRODUCT SPECIFICATION G09B-5	CUSTOMER:
PAGE: 3/5	(ELECTROMAGNETIC TRANSDUCER)	PRODUCER:

6. DIMENSION (UNIT: mm)



DATE: 2004. 1. 11	PRODUCT SPECIFICATION G09B-5 (ELECTROMAGNETIC TRANSDUCER)	CUSTOMER:
PAGE: 4/5		PRODUCER:

7. FREQUENCY RESPONSE (typical curve of type XCMT09B2701P)



DATE: 2004. 1. 11	PRODUCT SPECIFICATION	CUSTOMER:
PAGE: 5/5	G09B-5 (ELECTROMAGNETIC TRANSDUCER)	PRODUCER: