

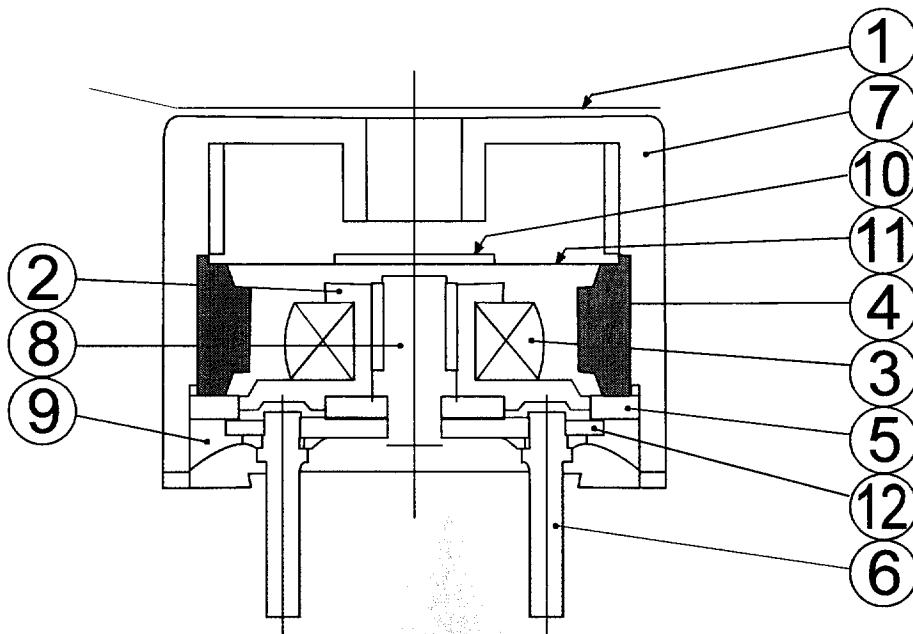
MAGNETIC BUZZER OPERATING PRINCIPLE AND CONSTRUCTION

The operating principle of magnetic buzzer is as follows:

The coil is located in the magnetic circuit consisting of a permanent magnet, an iron core, a highly permeable metal disk, and a vibrating diaphragm.

The disk and diaphragm are attracted to the core by the magnet's magnetic field. When an oscillating signal is moved through the coil, it produces a fluctuating magnetic field which vibrates the diaphragm at a frequency of the drive signal. Thus, sound is produced relative to the frequency applied.

PART DESCRIPTION



- | | | | |
|---|----------------|----|------------------|
| 1 | MASKING LABEL | 7 | CASE |
| 2 | BOBBIN | 8 | CORE |
| 3 | COIL | 9 | POTTING MATERIAL |
| 4 | PLASTIC MAGNET | 10 | MAGNET PIECE |
| 5 | BASE | 11 | DIAPHRAGM |
| 6 | PIN | 12 | P.C. BOARD |

MAGNETIC TRANSDUCER External Drive Circuitry

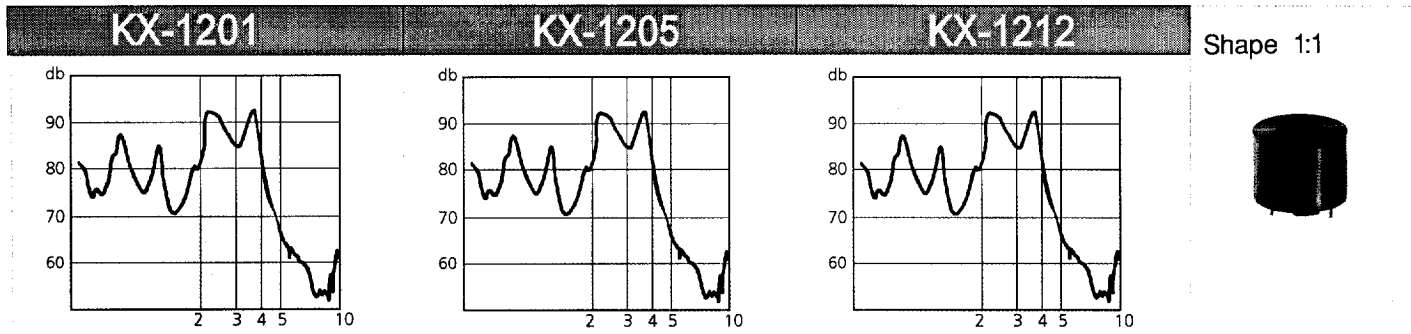
MODEL NO.	KX-1201	KX-1205	KX-1212
RATED VOLTAGE	1.5 VDC	5.0 VDC	12.0 VDC
OPERATING VOLTAGE	1.0 TO 3.0 VDC	3.0 TO 8.0 VDC	6.0 TO 15 VDC
*CURRENT CONSUMPTION	MAX. 40 mA	MAX. 40 mA	MAX. 40 mA
COIL RESISTANCE	16 Ω ± 4.5	47 Ω ± 7.0	140 Ω ± 21
COIL IMPEDANCE	40 Ω	80 Ω	240 Ω
RESONANT FREQUENCY	2400 Hz ± 200	2400 Hz ± 200	2400 Hz ± 200
*SOUND OUTPUT AT 10cm	MIN. 80 dB	MIN. 85 dB	MIN. 85 dB
OPERATING TEMPERATURE	-40 TO + 85 °C	-40 TO + 85 °C	-40 TO + 85 °C
STORAGE TEMPERATURE	-40 TO + 85 °C	-40 TO + 85 °C	-40 TO + 85 °C
WEIGHT	2.0 GRAMS	2.0 GRAMS	2.0 GRAMS
TERMINAL	TWO PIN LEAD TYPE	TWO PIN LEAD TYPE	TWO PIN LEAD TYPE

- * Value applying rated voltage (2400Hz, 1/2duty, square wave)
- * Value applying (Resonant Frequency, sine wave, measuring current 60 μA)

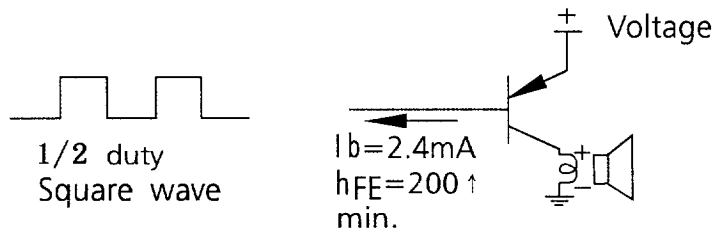
FEATURE

1. Dip-solderable, washable.
2. Wide voltage and temperature range.

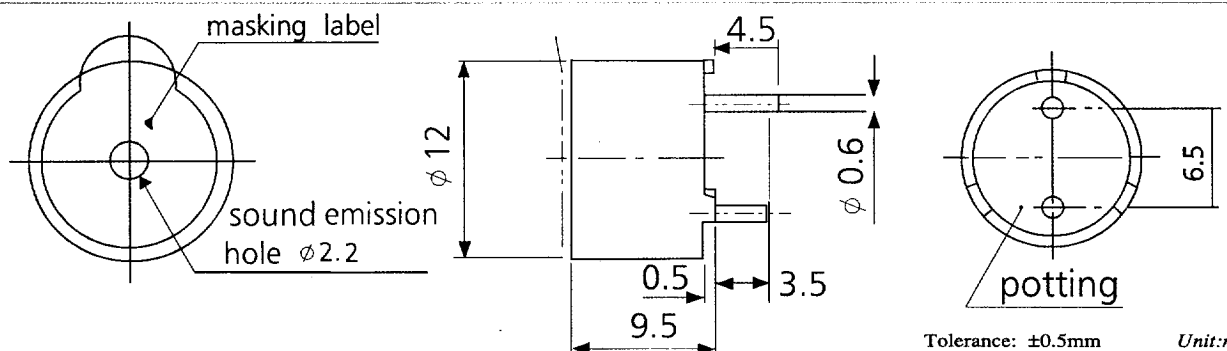
FREQUENCY CURVE



RECOMMEND DRIVING CIRCUIT



DIMENSIONS



Tolerance: $\pm 0.5\text{mm}$ Unit: mm
Housing material: Noryl SE1-GFN 2J

MAGNETIC TRANSDUCER Self Drive Circuitry

MODEL NO	KX-1201C	KX-1205C	KX-1212C
RATED VOLTAGE	1.5 VDC	5.0 VDC	12 VDC
OPERATING VOLTAGE	1.2 TO 3.0 VDC	4.0 TO 7.0 VDC	8.0 TO 16 VDC
CURRENT CONSUMPTION	MAX. 30 mA	MAX. 35 mA	MAX. 35 mA
BASIC FREQUENCY	2300 ± 300 Hz	2300 ± 300 Hz	2300 ± 300 Hz
SOUND PRESSURE LEVEL (10cm)	MIN. 80 dB	MIN. 85 dB	MIN. 85 dB
OPERATING TEMPERATURE	-40 TO + 85 °C	-40 TO + 85 °C	-40 TO + 50°C
STORAGE TEMPERATURE	-40 TO + 85 °C	-40 TO + 85 °C	-40 TO + 85°C
WEIGHT	2.0 GRAMS	2.0 GRAMS	2.0 GRAMS
TERMINAL	TWO PIN LEAD TYPE	TWO PIN LEAD TYPE	TWO PIN LEAD TYPE

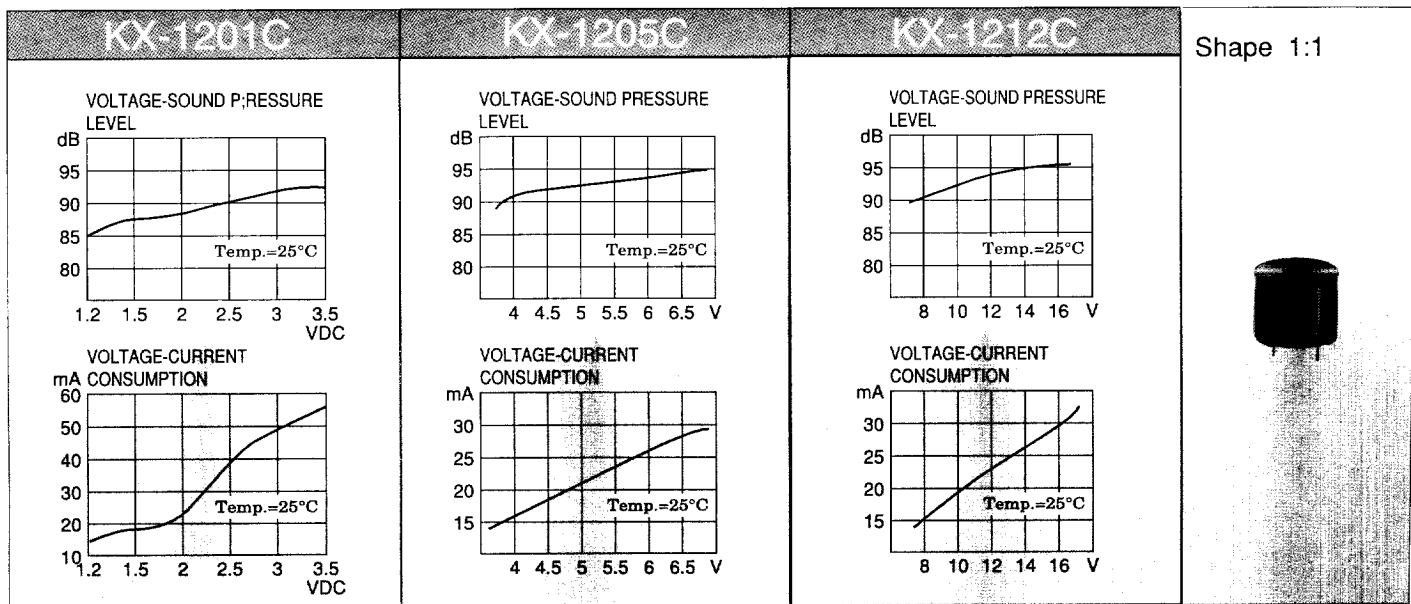
FEATURE

1. Sealed design for soldering and flux washing
2. Compact
3. Low current consumption

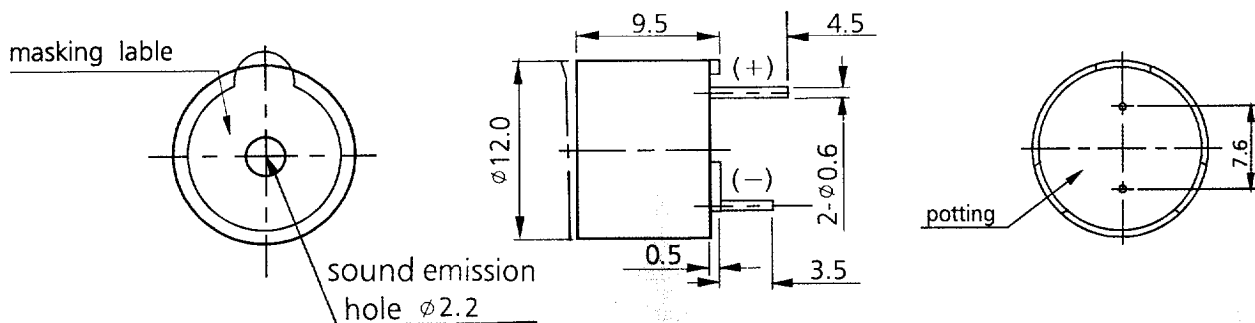
REMARK:

1. Hand soldering condition 350°C within 1.5 seconds.
2. Dip soldering condition 250°C within 5 seconds.

CHARACTERISTIC



DIMENSIONS



Tolerance: $\pm 0.5\text{mm}$ Unit: mm
Housing material: Noryl SE1-GFN 2J

MAGNETIC TRANSDUCER External Drive Circuitry

MODEL NO.	KX-1601	KX-1606	KX-1612
RATED VOLTAGE	1.5 VDC	6.0 VDC	12 VDC
OPERATING VOLTAGE	1.0 TO 3 VDC	3.0 TO 12 VDC	6.0 TO 18 VDC
* CURRENT CONSUMPTION	MAX. 12 mA	MAX. 40 mA	MAX. 40 mA
COIL RESISTANCE	30 ± 4.5 Ω	50 ± 7.0 Ω	115 ± 17 Ω
⊙ COIL IMPEDANCE	80 Ω	110 Ω	200 Ω
RESONANT FREQUENCY	2048 ± 200 Hz	2048 ± 200 Hz	2048 ± 200 Hz
* SOUND PRESSURE LEVEL (10cm)	MIN. 80 dB	MIN. 85 dB	MIN. 85 dB
OPERATING TEMPERATURE	-30 TO +85 °C	-30 TO +85 °C	-30 TO +85 °C
STORAGE TEMPERATURE	-40 TO +85 °C	-40 TO +85 °C	-40 TO +85 °C
WEIGHT	7.0 GRAMS	7.0 GRAMS	7.0 GRAMS
TERMINAL	TWO PIN LEAD TYPE	TWO PIN LEAD TYPE	TWO PIN LEAD TYPE

* Value applying rated voltage (2048Hz, 1/2duty square wave)

⊙ Value applying (Resonant Frequency, sine wave, measuring current 60 μA)

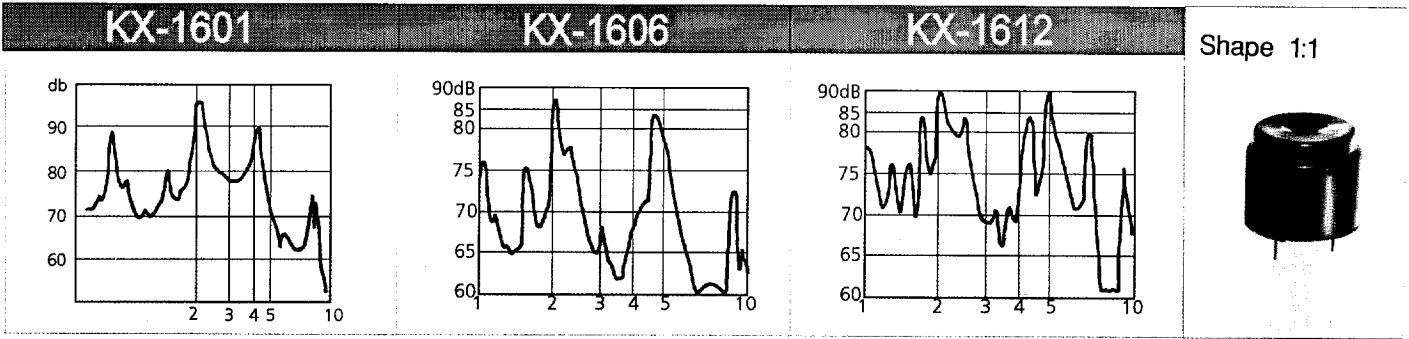
FEATURE

1. Sealed design for soldering and flux washing.
2. Compact

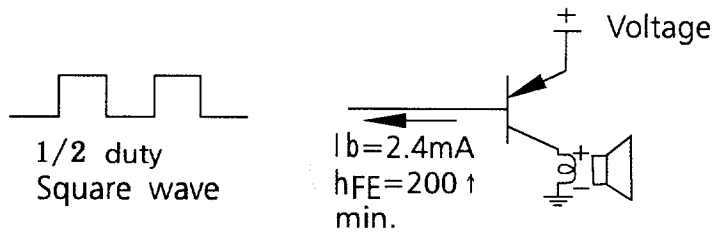
REMARK

1. Hand soldering condition 350°C within 1.5 seconds.
2. Dip soldering condition 250°C within 5 seconds.

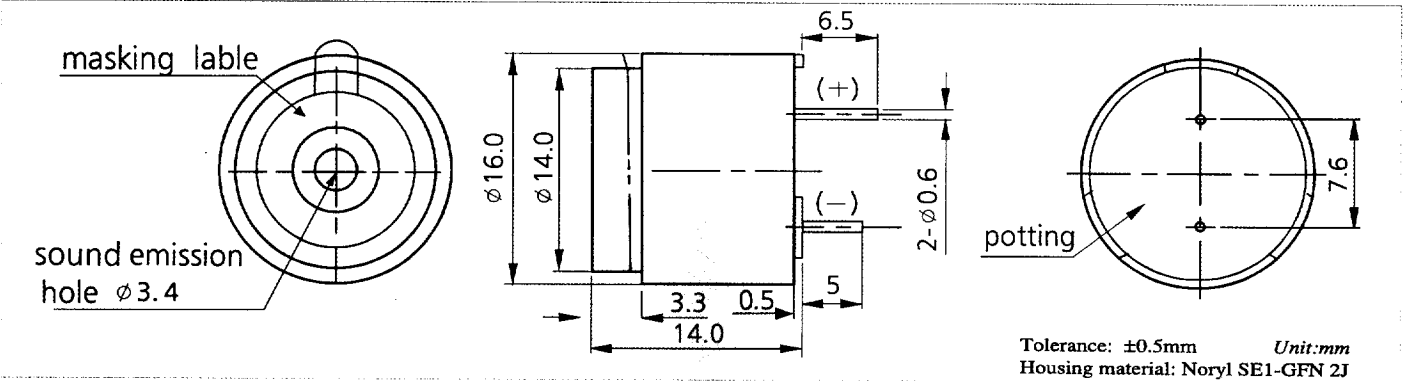
FREQUENCY CURVE



RECOMMEND DRIVING CIRCUIT



DIMENSIONS



MAGNETIC TRANSDUCER Self Drive Circuitry

MODEL NO.	KX-1606C	KX-1612C
RATED VOLTAGE	6.0 VDC	12 VDC
OPERATING VOLTAGE	4.0 TO 7.0 VDC	8 TO 16 VDC
CURRENT CONSUMPTION	MAX. 30 mA	MAX. 30 mA
BASIC FREQUENCY	2200 Hz ± 300 Hz	2200 Hz ± 300 Hz
SOUND PRESSURE LEVEL (10cm)	MIN. 85 dB	MIN. 85 dB
OPERATING TEMPERATURE	-30 TO 85 °C	-30 TO 85 °C
STORAGE TEMPERATURE	-40 TO 85 °C	-40 TO 85 °C
WEIGHT	7.0 GRAMS	7.0 GRAMS
TERMINAL	TWO PIN LEAD TYPE	TWO PIN LEAD TYPE

FEATURE

1. Sealed design for soldering and flux washing
2. Compact
3. Low current consumption

REMARK:

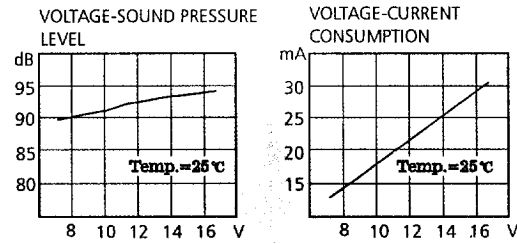
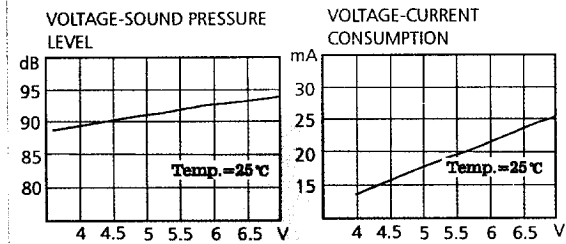
1. Hand soldering condition 350°C within 1.5 seconds.
2. Dip soldering condition 250°C within 5 seconds.

CHARACTERISTIC

KX-1606C

KX-1612C

Shape 1:1



DIMENSIONS

