PART NUMBERING SYSTEM

USE 24 3 38 P A

suffix for special leads length, numbering by A, B, C, ....

For lead type
- P: lead pin type
- W: lead wire type
- ST: SMD type

Appropriate oscillating frequency, unit: 100Hz
- ex. 3800Hz numbering by 38

For electrode driving
- 2: for External Drive type (2 lead pins or wires)
- 3: for Self Drive type (3 lead pins or wires)
- C or D or P: for Drive Circuit Built-In type

Diameter of plastic housing
(1) Telephone Ringer Type

(2) Self-Oscillation Circuit (Tr-Type)

(3) External-Drive Circuits

IC Oscillation Circuit

Load Resistance Type

IC Oscillation Circuit

Load Resistance Type

IC Oscillation Circuit

Blocking Oscillation Type

Multi-Vibrator Type
PART NUMBERING SYSTEM

USE 12 01 N - B 1 W

For Wire type only (No numbering for pin type)
Numbering for various spec. of marking or leads length
Numbering for various spec. of frequency, impedance & material
Serial number for various types
A,B,K: for the external drive with sealed type
C,D,F: for the internal drive with sealed type
G,H,J: for the external drive without sealed type
R,N: for the side emission hole design
M: for the bigger emission hold
Y: for the side emission hold on the top of buzzer
S,T: for the type of SMD buzzer

For the rated voltage
ex. 1.5V numbering by 01; 3.0V numbering by 03

Diameter for the buzzer
CONSTRUCTION OF MAGNETIC TRANSDUCER

With reference to the below drawing which shows the construction of 90, 120, 160 type magnetic transducers, the operation principle of miniature sound transducers can be explained as follows:

as shown in the drawing, the metal vibrating disk located in between two covers oscillated and makes sound by the magnetic field which attracts the vibrating disk being affected by the imposed magnetic flux.

This movement is generated by the current through the coil which is located in the magnetic circuits consisting of permanent magnet and iron core,

<table>
<thead>
<tr>
<th>NO.</th>
<th>Name of Parts</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cavity</td>
</tr>
<tr>
<td>2</td>
<td>Cover</td>
</tr>
<tr>
<td>3</td>
<td>Vibrating weight</td>
</tr>
<tr>
<td>4</td>
<td>Vibrating disk</td>
</tr>
<tr>
<td>5</td>
<td>Pole</td>
</tr>
<tr>
<td>6</td>
<td>Magnet</td>
</tr>
<tr>
<td>7</td>
<td>Magnet holder</td>
</tr>
<tr>
<td>8</td>
<td>Cover</td>
</tr>
<tr>
<td>9</td>
<td>Coil</td>
</tr>
<tr>
<td>10</td>
<td>Yoke plate</td>
</tr>
<tr>
<td>11</td>
<td>P.C. board</td>
</tr>
<tr>
<td>12</td>
<td>Pin long</td>
</tr>
<tr>
<td>13</td>
<td>Pin short</td>
</tr>
</tbody>
</table>

CONSTRUCTION VIEW OF 90, 120, 160 TYPE

BASIC POINTS FOR ADEQUATE USES

1. Frequency Characteristics
Magnetic Transducers are driven by an input frequency. The given frequency characteristics can be obtained only when applying square wave (Vₒ-p).
The end-users must know the facts that the characteristics of frequency may be quite changed in different shapes with the applied various waves, like sine wave, square wave (Vₒ-p) or the other waves.

2. Rated Voltage
When other voltages are applied than our recommended one, the characteristics of frequency will be also changed. To have best performance, the recommended voltage by USE has better being used always.

STANDARD DRIVING CIRCUIT FOR TRANSDUCER
**PART NUMBERING SYSTEM**

**USE TE 27 2 44 -11**

- **Material identification**
- **Appropriate oscillating frequency, unit: 100Hz**
  - ex.: 700Hz numbering by 07
  - 4400Hz numbering by 44
- **For electrode driving**
  - 2: without feedback electrode (External drive type)
  - 3: with feedback electrode (Self drive type)
- **Diameter of metal plate**
- **Special requirement**
  - TE: for regular piezo ceramic element only
  - TW: for piezo ceramic soldering with lead wires
  - SE: element for speaker application
  - SW: Speaker element soldering with lead wires
  - RE: element for Telephone Receiver application
  - RW: Receiver element soldering with lead wires
1. Input Voltage: operating AC voltage only.
2. It's available to supply the piezo element with lead wires. Please specify the P/N by "TW" instead of "TE" and the wire length you required.
   ex. USE-TW15260-16 w/lead wires 85±5m/m long. (Φ Dia.11-12mm elements are not available with lead wire.)
PART NUMBERING SYSTEM

USE 15 032 F - 01

Serial number for various special spec.
Frame type
F: metal housing  G: plastic housing
Nominal Impedance, ex: 032 = 32ohms
Diameter of Mylar Speaker

NOTE: The number of impedance and power rate are able to be changed as per specific inquiry.