PRODUCT NAME
TM87 series

TITLE
TM87 series products apply to 3V power supply and LCD 1/3 bias. The following is the application circuit used to prevent the interference from piezoelectricity effect of the Buzzer.

APPLICATION NOTE

Description:
Since the buzzer is a device of piezoelectricity, a bending phenomenon will occur when apply the electrical field on its two electrodes. Conversely, when the buzzer is bent by a stress, it will create voltage drop on the two electrodes. Therefore, it can be used as a small microphone (some voice-control toys use Buzzers as the trigger component.) When we directly knock on the buzzer, we can measure this voltage drop through an oscilloscope. The result will indicate that there are voltage drop in units of tens to hundreds on the two electrodes of the buzzer.
In some applications, Buzzers are used as beepers. If the BZ and BZB pins of TM87 are directly used to drive the buzzer, as shown in Fig. 1, once the buzzer encounters external stress such as getting hit, the voltage drop of piezoelectricity will interfere the system through BZ and BZB pins. When that occurs, system will be malfunction.
Solution:
We can modify the application circuit of the Buzzer as follow,
Refer to Fig. 1, adding a transistor and an inductor to increase the buzzer volume. According to this application circuit, the system will not be malfunction when apply a stress to the Buzzer.
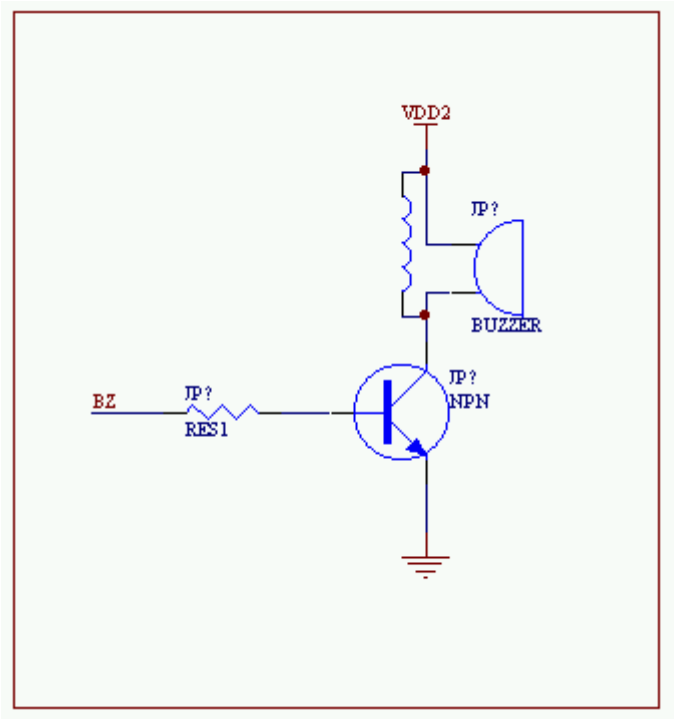
Fig. 1: