



**MOTOROLA**

*Product Preview*

## Tone Operated Switch

The Tone Operated Switch is a CMOS integrated circuit capable of detecting input tones of audio frequency between 10 Hz to 50 Hz. Two metal options MC141502 and MC141503 are available for various applications such as tone operated toys, and tone decoder in home appliances, telemetry and communication.

The input stage of the device consists of an amplifier and a Schmitt trigger which, by connecting an appropriate external resistor, provides the user a choice between high sensitivity input and Schmitt trigger input.

Upon receipt of a tone, the device amplifies the signal to an acceptable amplitude, and then compares the tone frequency with the preset value ( $f_0$ ) which is determined by an external RC. An output will be triggered when a tone whose frequency is within the band defined by the preset value and the selected bandwidth is detected. The bandwidth can be 5% or 10% above  $f_0$ .

In response to a valid detection, MC141502 provides a bistable output, whereas MC141503, a monostable output.

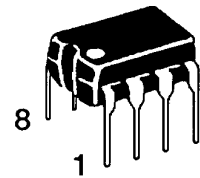
### Features:

- High sensitivity input or Schmitt trigger input
- Operating frequency between 10Hz – 50KHz
- Detecting frequency is presetable by an external RC
- 5 or 10% detecting bandwidth selection
- 2–6 V operation
- Metal options for monostable output and bistable output
- 8-pin DIL/SO
- Applicable to tone operated toys and tone decoder in home appliances, telemetry and communication, etc.

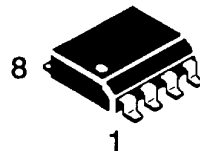
**MC141502  
MC141503**

**CMOS LSI**

**LOWER POWER  
COMPLEMENTARY  
CMOS**



P suffix  
Plastic package  
Case 626-04



D suffix  
Plastic package  
Case 751-01  
S0-8