Operation Description

TMP3FT-F(DG)

Operation Frequency Range: 88.1M-107.9MHz

Modulation Type: FM

1. The device is supplied by 2 batteries. 3 V is increased to 3.3 V by IC U5 (BL8530) to supply MCU U1 (EM78153). The device is standby.

2. Press key "POWER" longer than 3 seconds, MCU send a signal 0 level to an electronic switch to switch on the device. MCU derives memory data from U3 (24C02) and send signals to FM IC U4 (BH1417) via pins DA, CK and CE. Meanwhile, send signals to display IC U2 (HT1621).

3. IC U2 (HT1621) displays frequency on LCD.

4. IC U4 (BH1417) works. Base frequency is 7.62 MHz produced by oscillator. External LC produces a frequency. After comparison, MCU produces a frequency to be transmitted by coupling capacitor C10, match network and antenna.

5. Audio signal is input to IC U4 (BH1417) via match network. The audio signal is modulated and transmitted.

6. MCU monitors audio input by circuit of (Q2, Q3, R5, R6, R8, R9, R10, C3, C4, D2). If detecting no input after 45 seconds, MCU will shut off the device and display "OFF" on LCD. If audio input, MCU will recover to working mode.