

## **Circuits description for VRFM6**

The product is combined by 5 parts: Power, Transmitting, LED display, MCU control, Memory.

1. Power: The precise regulator n. IC LM78L05 and filter circuit as power source of FM transmitting LED display, MCU control.
2. Transmitting: VCO (Voltage Controlled Oscillator) circuit, PLL circuit, choose frequency circuit, OSC (Oscillator) circuit, Audio combination circuit, matching network.
  - a. VCO circuit: combined by L2、 DF1、 DF2、 C24、 C22、 R12、 R13、 R74、 HY1428
  - b. PLL circuit: combined by R15、 HY1417LP
  - c. IO port: combined by 14、 15、 16、 9、 10 and external pull high resistance
  - d. OSC circuit: combined by Y1, loaded capacitor C14、 C15.
  - e. Audio Combination & Pre-set bass circuit: combined by C1、 C2、 R1、 R2、 R3、 R4、 C41、 C42、 R5、 R6、 C3、 C11、 R7
  - f. Matching network: combined by DF3、 DF4、 R40、 R34、 R39、 R38、 L4、 C30、 C32、 C34、 Q3、 R49、 L5、 C33、 C51、 C52,
3. LED display: combined by digital LED、 Q1、 Q2、 Q3、 Q4、 R1、 R3、 R5、 R7、 R10、 R2、 R4、 R6
4. MCU control: combined by IC CST0360 controlling frequency adjustment and frequency display.
5. Memorized circuit: combined by IC 24C02 as memory when power broke.