TV modulator Bluetooth Media Adapter

Circuit Description

1 MC44BS373CA, from Freescale, programmable TV modulator works at 4MHz clock. video and audio baseband signal is modulated into a TV RF channel, from 415MHZ to 445 MHz.

2. 3 transistors, two AT41533, a 2SC3357, is RF output circuit for buffering and isolating.

3. A F-connector is used to output modulated TV signal to TV receiver set, by cable connection. The TV signal has center frequency of 430MHz with bandwith of 30 MHz.

4 .10P55B1, from MDT, an 8bit microcontroller to control TV modulator and set 4 TV channel, via I2c bus.

5 LM317, from NSC, Linear regulator, output 5VDC.

6. BC03EXT, Bluetooth chipset, CSR, use 26Mhz crystal as clock and reference frequency for RF circuit. A

built-in PLL frequency synthesizer is used to generate ISM RF carrier, from 2.402Ghz to 2.480 Ghz.

7. A Balun filter is used for coupling and matching RF signal to F connector output.

8. A built-in PIFA antenna is used for radiating/ receiving bluetooth Radio signal.

9. A built-in trim circuit in blue tooth chipset is used to adjust crystal to the specified limit.

10. The adaptor is powered by 6VDC, from 4 Cell alkaline battery, and 3.0Vdc regulator generate the voltage for Bluetooth chipset.

11. An Flash memory of 8Mbit is used for saving program code and configuration information.

12. WM8731 codec is used for inter-converting analog audio and PCM digital audio.