Low power transmitter for wireless capsule endoscope

ABSTRACT

This paper presents the transmitter circuit designed for the application of wireless capsule endoscope to overcome the limitation of conventional endoscope. The design is performed using CMOS 0.13 εm technology. The transmitter is designed to operate at centre frequency of 433.92 MHz, which is one of the ISM band. Active mixer and ring oscillator made up the transmitter and it consumes 1.57 mA of current using a supply voltage of 1.2 V, brings the dc power consumption of the transmitter to be 1.88 mW. Data rate of 3.5 Mbps ensure it can transmit high quality medical imaging.

Keyword: Transmitter circuits; Wireless capsule endoscope