

RF Amplifier is a FM stereo transmitter that transmits simple configuration. Digital signal that is received from TCC 730 is inputted by RF amplifier of Dual Gate MOSFET (RU1) being changed to voice signal passing Dual Gate MOSFET (U6) CODEC, and alter stereo signal and carrier wave signal and emit FM signal through ANT.

The RF Amplifier consists of a stereo modulator for generating stereo composite signals and a FM signal on the air.

The FM transmitter radiates FM wave on the air by modulating the carrier signal with a composite signal.

Local Oscillator

The first local oscillation frequency is derived from a single 7.6 MHz crystal by means of a phase locked loop .

The transmitter frequency is from 78.5 kHz(channel A) to 81.5 kHz(channel H) .

The first IF is 80kHz.

Mixer

The first mixer is constructed with a Dual Gate MOSFET(RU1), After the received signal has amplified from the TCC731, it is injected in the Dual Gate MOSFET(TX IN R)Dual Gate MOSFET (TX IN L).

And the received signal and local oscillation frequency are heterodyned at RU1 to produce a 38kHz intermediate frequency (IF) signal.

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FM Tuner

The signal which is received from TCC731 through antenna is adjusted in Dual Gate MOSFET(U7) FM Tuner. The signal is converted to audio signal in Dual Gate MOSFET(U6) CODEC and send to the earphone through Dual Gate MOSFET(J1).

CODEC

Audio signal that is inputted through Dual Gate MOSFET(MK1) and Dual Gate MOSFET(J2) converted to the digital signal in CODEC. The signal compressed to MP3 file at TCC731 and stored at NAND Flash. On the mode, the signal is converted to analog signal.

TCC731

TCC731 that consists of 16bit RISC MCU and 24bit DSPs run by 32.768MHz crystal. Also, it controls the each block by NOR FLASH.