

EXHIBIT B

(FCC Ref. 2.1033(b)(4))

"Description of Circuit Functions"

27600 Circuit Description:

The following circuit description for model 27600 is base on the circuit diagram and block diagram of 27600.

27600 Handset:

1. Receiving Path

The receiving path is established by below sections.

Low Noise Amplifier (LNA)

FM signal filtering by the a dielectric filter, and input to tuning amplifier Q18 and input to the second dielectric filter, then, input to 2nd tuning amplifier Q17 before the input to the first mixer Q2. The 3rd LNA (Buffer amplifier just after the 818MHz dielectric filter) is connected to the 2nd mixer input.

Mixer

The first mixer is included Q2, which input from the 2nd tuning amplifier and the doubler output (from Q16) (for this LO is the 2nd harmonic of the VCO). Then the output of the first mixer is connected to the 818 MHz dielectric filter.

The 2nd mixer including F5, which the input is connected to the output of the Buffer amplifier Q3 and the LO form the VCO. The down mixing product is 10.7 MHz for the demodulation process

The IF buffer amplifiers are included F6 and F10 on the RF module, and the last output is going down to the baseband main board for demodulation. A ceramic filter CF1 is used for selection.

RXVCO

Local oscillator Q14, Q15, and Q16 (the doubler), which is controlled by the PLL F9 and the loop filter output is pin16.

FM demodulator and expander

The IF is demodulate by quadrate coil T1, then the recovered audio is input to the expander for de-emphasis, before output to the handset speaker though audio amplifier.

2. Transmitting Path

The transmitting path is established by below sections.

Mic amplifier and compressor

Audio pick up by handset microphone is amplified by internal mic amplifier of U1, then input to compressor for pre-emphasis, before input to the modulator (TXVCO).

Modulator and TXVCO

Q12 and Q13, which is controlled by PLL of F1, construct the transmitted VCO frequency. Combined audio and data signal input to the TXVCO will cause a frequency modulation progress.

RF power amplifier

Q11 (the driver amplifier) and Q7 amplify FM signal (last stage power amplifier). At last the transmitted signal is fitted into the antenna via a dielectric filter F8.

27600 Base Unit:

1. Receiving Path

The receiving path is established by below sections.

Low Noise Amplifier (LNA)

FM signal filtering by the a dielectric filter, and input to tuning amplifier Q18 and input to the second dielectric filter, then, input to 2nd tuning amplifier Q17 before the input to the first mixer Q2. The 3rd LNA (Buffer amplifier just after the 808MHz dielectric filter) is connected to the 2nd mixer input.

Mixer

The first mixer is included Q2, which input from the 2nd tuning amplifier and the doubler output (from Q16) (LO is the 2nd harmonic of the VCO). Then the output of the first mixer is connected to the 808 MHz dielectric filter.

The 2nd mixer including F5, which the input is connected to the output of the Buffer amplifier Q3 and the LO form the VCO. The down mixing product is 10.7 MHz for the demodulation process

The IF buffer amplifiers are included F6 and F10 on the RF module, and the last output is going down to the baseband main board for demodulation. A ceramic filter

CF1 is used for selection.

RXVCO

Local oscillator Q14, Q15, and Q16 (the doubler), which is controlled by the PLL F9 and the loop filter output is pin1.

FM demodulator and expander

The IF is demodulate by quadrate coil T1, then the recovered audio is input to the expander U1 for de-emphasis, and the audio signal is fitted into the telephone circuit.

2. Transmitting Path

The transmitting path is established by below sections.

Audio input and compressor

Audio picked up by from the telephone baseline circuit for the process including the compressor of pre-emphasis, before input to the modulator (TXVCO).

Modulator and TXVCO

Q12 and Q13, which is controlled by PLL of F1, construct the transmitted VCO frequency. Combined audio and data signal input to the TXVCO will cause a frequency modulation progress.

RF power amplifier

Q11 (the driver amplifier) and Q7 amplify FM signal (last stage power amplifier). At last the transmitted signal is fitted into the antenna via a dielectric filter F8.

3. Telephone line interface

The telephone line interface circuit is established by below sections.

Audio power amplifier

Q1, Q2, and Q5 are built as a power amplifier, according to high current output requirement for line interface.

Line relay & isolation transformer

T4 is the line isolation transformer, both audio input and output is though this transformer. RL1-A is the reed relay for line seize, which is controlled Q3.

Ring detect circuit

IC2-A and IC2B is used as a differential amplifier for pick up the ring signal , which is input though two 20M ohm 1/4 Watts resistor (R44 and R45) as an isolation from the line.

27600 digital security coding system:

The handset and base unit of 27600 will exchange a random generated 16 bits digital security code, when every time the handset put on the charging cradle of base unit . This is to FCC Part 15.214(d) requirement.