

EXHIBIT B

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

"Description of Circuit Functions"

27910 Circuit Description :

The following circuit description for Model 27910 are base on the circuit diagram and block diagram.

27910 Handset

1. Receiving Path

The receiving path is established by below stages:

a) Low Noise Amplifier (LNA)

FM signal filtering by the 2403MHz dielectric filter F16, and input to tuning amplifier Q18. Then output to second stage.

b) Mixer

Mixer stage is included of Q23, F5 and local oscillator Q12, Q13 & Q14 , which is controlled by the PLL F9 PLL pin . The IF (808MHz) is filtering by a 808MHz dielectric filter F18 and feed to Q19 for amplifier then go to second mixer Q24, then mix to 10.7MHz IF signal by CF1 and by to U1 pin 40.

c) IF Amplifier

IF amplifier is built in U1. Amplified IF is filtering again by a ceramic filter F2 , the filtered IF will input to FM demodulator U1 pin 33.

d) FM Demodulator and Expander

The second IF signal is demodulated by quadrature coil T1 , then the recovered audio signal is input to the Expander stage in U1 for de-emphasis before output to the handset speaker through the audio amplifier in U1.

2. Transmitting Path

The transmitting path is established by below stages:

a) 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(Tx VCO).

b) Modulator and Tx VCO

The transmit VCO is constructed by Q12 & Q13 , which is controlled by PLL of U1 pin13. Both audio and data signal are input to the transmit VCO will cause a frequency modulation progress.

e) RF Power Amplifier

FM signal is amplified by Q11 & Q7 and match to the antenna though 2475MHz dielectric filters (F15).

27910 Base Unit

1. Receiving Path

The receiving path is established by below stages:

a) Low Noise Amplifier (LNA)

FM signal filtering by the 2475MHz dielectric filter , and input to tuning amplifier Q18. Then input to 2nd tuning amplifier Q17 before output to mixer .

b) Mixer

Mixer stage is included of Q23, F5 and local oscillator Q12, Q13 & Q14 , which is controlled by the PLL F9 PLL pin . The IF (808MHz) is filtering by a 808MHz dielectric filter F18 and feed to Q19 for amplifier then go to second mixer Q24, then mix to 10.7MHz IF signal by CF1 and by to U1 pin 40.

c) IF Amplifier

IF amplifier is built in U1. Amplified IF is filtering again by a ceramic filter F2 , the filtered IF will input to FM demodulator U1 pin 33.

d) FM Demodulator and Expander

The second IF signal is demodulated by quadrature coil T1 , then the recovered audio signal is input to the Expander stage in U1 for de-emphasis before output to the handset speaker through the audio amplifier in U1.

2. Transmitting Path

The transmitting path is established by below sections.

a) 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(Tx VCO).

b) Modulator and Tx VCO

The transmit VCO is constructed by Q12 & Q13 , which is controlled by PLL of U1(PIN13) . Both audio and data signal are input to the transmit VCO will cause a frequency modulation progress.

c) RF Power Amplifier

FM signal is amplified by Q11 & Q7 and match to the antenna though 2475MHz dielectric filter (f15).

3. Telephone Line Interface

The telephone line interface circuit is established by below stages:

a) Audio Power Amplifier

IC1c & IC2d are built as a audio amplifier , according to high current output requirement for line interface.

b) Line Relay & Isolation Transformer

T1 is the line isolation transformer , both audio input and output is though this transformer . RL1 is the reed relay for line seize , which is controlled by Q3.

c) Ring Detect Circuitry

IC1a and IC1b are used as a differential amplifier for picks up the ring signal , which is input though two 20M ohm resistor (R44 and R45) as an isolation from the line.

27910 Digital Security Coding System :

The handset and base unit of 27910 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.