EXHIBIT B

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

"Description of Circuit Functions"

Circuit Description for AT2430

This is a 2.4GHz WDCT cordless telephone with type 2 caller ID & call waiting and analog clock display for domestic use. Radio transmitter with FM technology provides greater mobility to the user within approximately 200 meters radius around the base.

Following paragraphs describe the detail of major building blocks.

1. Ringer Detection

a. Base

Incoming ringer signal is first attenuated by C4, D12, D8,R3,R1 and Q11. The signal is then feed to micro-controller (MCU) U100 for generating response signal according to the setting of inputs. When the ringer switch is set to on position MCU sends digitally coded information to handset via RF link.

b. Handset

When digitally coded information is received from the base it will be decoded at MCU U301. Then necessary ringer is generated and applied to U400, which drive the Speaker J400.

2. Surge protection

The surge absorber VR1 is mounted in the Base unit. It designed to operate when voltage over 330V. In general it is common to have induced surges in the telephone line due to lightening. If it allow entering the unit damage to the unit is imminent. The line interface, fuse and ringer detected circuit is most venerable to high voltage surges and VR1 surge absorber can prevent it.

3. Line control

When the unit is operated by remote handset, line control is done by MCU. It turns on transistor Q7. Then telephone line power feeds to line interface circuit (Q5), turn on the telephone line and internal voice path, and around component.

4. Power Control

a. Base unit

The main power is come from AC/DC adaptor, which provide 9V DC to the unit. Inside the unit there are two different voltages available for different modules. 9V non-back up voltage is supplied to the audio amplifier. Radio part, MCU and line interface related circuit is supplied with non-backup regulated 3.3V voltage.

b. Handset

Three cells of Ni-MH battery(3.6V) provided necessary power to the handset. In order to keep power consumption to minimum, the radio receiver is turn on and off periodically by MCU and Q303,Q304. The MCU is supplied with regulated 1.8V and 2.5V by U301.

5. RF system specification

This radio system uses the ISM band from 2400MHz to 2483.5MHz. The modulation is a standard GFSK, with 0.864MHz channel bandwidth and the data is transmitted at a bit rate of 576 kbit/s. All transmissions are hopped equally over 95 channels, implemented by the frequency hopping spread spectrum technique. The regular TDMA is used. The frame structure is repeated every 10ms, corresponding to 5760-bit duration, and will not be greater than 0.4 seconds on any frequency. It is in accordance with the FCC rules. This frame is divided into 4 uplink slots lasting 5ms, and 4 downlink slots. So the system is either receiving or transmitting at any given time.

a.Receiver

The receiver of the radio chipset incorporates a LNA, a mixer, channel filters, amplifier stage with RSSI indicator, demodulator and data slicer.

The channel filter in the receiver path is based on the Low-IF architecture. It is equivalent to a band-pass filter around to 864kHz IF frequency combined with image rejection architecture. It can be used to further reduce the receiver's susceptibility to out-of-band signals. Due to this IF frequency, the LO frequency should be 864kHz above the wanted RF frequency.

The data slicer converts the demodulated analog data to NRZ (binary) format.

One pin diode (D1) works as the T/R switch (Transmit / Receive Switch), which selects between the reception and transmission paths.

In our radio system, it can support two antennas. Another pin diode (D2) is performing the antenna selection. It is controlled by the signal supplied by baseband controller for the implementation of antenna diversity.

The PCB printed band-pass filter is used between T/R switch and the antenna switch. It is used to remove partially the unwanted signals occurring outside the DECT band, and to reduce undesired emissions during transmission.

b.Transmitter

The transmitter of the radio chipset utilizes GFSK architecture. The VCO oscillates at twice the ISM 2.4GHz band, then pass through the integrated frequency divider and divide the signal to desired RF frequency in the 2400 to

2483.5MHz range. The VCO is directly modulated with GFSK filtered data. The transmitted power is typically 3dBm.

An external silicon power amplifier is used. It consists of 3 cascaded gain stages and amplifies the typical 3dBm at its input to nominal 20dBm at the antenna ports including overall loss. Base and handset have the same power level. The external power amplifier connects to the transmitter of the radio chipset with appropriate impedance matching and harmonics filtering components.

The same RF signal path as mentioned in the receiver, the external power amplifier also connects with T/R switch, PCB printed band-pass filter and the antenna switch. They have the same function as described in the receiver's section.

c.Voltage Controlled Oscillator (VCO) and Synthesizer path

The fully integrated VCO operates at twice the ISM 2.4GHz band frequency. The output of the prescaler is used to drive the synthesizer main divider and this output can also be switched to either the transmitter or the receiver LO output buffer of the radio chipset.

The main divider is clocked by the RF signal from the prescaler at frequencies from 2400 to 2483 MHz. The reference divider is clocked by a 13.824MHz crystal. It must be aligned better than +/- 2 ppm for frequency accuracy.

The Phase-Lock Loop (PLL) tunes the VCO to a given channel based on control signal of 3-line serial bus. These control signals are come from the baseband controller. The minimum PLL locking time is 300 us.

d. Antenna

The antennas utilized in the base and handset are quarter-wave monopole. Since quarter-wave monopole is small in size and the antenna wire is mounted over the ground plane, the antenna gain is 1 dBi for this configuration. In the base unit, it contains two antennas for antenna diversity. In the handset unit, it contains only one antenna.

e. Shield Can

The radio module is fully covered with a suitable shield can in order to minimize the interference to other equipment or device.

6. Speakerphone

Dial the handset first, press the speakerphone button and turn off handset, MCU(U301) control Q400 b ,U400(MC34119) pin1 change to low level ,Follow open speck the audio path unit can be operated in speakerphone mode.