

EXHIBIT C

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

"Description of Circuit Functions"

# Circuit Description

Model: 25831

The following circuit description for model 25831 is based on the circuit diagram and block diagram of 25831

## Handset Unit

### 1. Receiving Path

The receiving path is established as below sections

#### **Antenna, Low Noise Filter, Mixer, Band Pass Filters, and Demodulator**

RF signal is pick up by a RX soft wire antenna (ANT1) and then filtered by the 5.8GHz Band Pass filter (F1), it then go through the 5.8GHz Low Noise Filter make by MT4S101U(Q5), and then mix with the 3.36GHz signal which produced by MCD8825 (U2) PLL IC, 2SC5066 (Q3), BFR183T (Q4) and MT4S101U (Q6) Local Oscillator, and the 3.36GHz Band Pass Filter constructed by L15 and C75 in the NESG2031 (Q7) Mixer. After that, the signal passes the 2.4GHz Band Pass Filter make by L1 and C13. Finally it inputs to RX of U1 (DH24RF17B) transceiver IC. Then though mixer and FSK data output from demodulator

#### **FSK data demodulate**

The FSK data is output form DH24RF17B transceiver IC, then go to EDCT controller chip DCH36107 for decode to an audio signal before output to the handset speaker though audio amplifier.

### 2. Transmitting Path

The transmitting path is established as below sections

#### **Mic amplifier and encoder**

Audio signal pick up by handset microphone is amplified by internal mic amplifier of U2 DCH36107 EDCT controller, then go to encoding.

#### **Modulator, RF Power amplifier and Antenna**

The FSK data is output from the EDCT controller chip, then input to transceiver IC DH24RF17B. The carrier signal with modulation go though the 2.4GHz Printed Low Pass Filter (Microstrip line filter). Finally, the RF signal propagates though a TX soft wire antenna (ANT2).

## **Base Unit**

### **1. Receiving Path**

The receiving path is established as below sections

#### **Antenna, Mixer, Demodulator**

RF signal is picked up by a RX solid wire antenna (ANT2) and then filtered by the 2.4GHz Band Pass filter (FL2), and input to RX of U1 (DH24RF17B) transceiver IC. Then through mixer and FSK data output from demodulator

#### **FSK data demodulate**

The FSK data is output from DH24RF17B transceiver IC, then go to EDCT controller chip DCH36119 for decode to an audio signal before output to the handset speaker through audio amplifier.

### **2. Transmitting Path**

The transmitting path is established as below sections

#### **Amplifier and encoder**

Audio signal come from line interface is amplified by internal amplifier of U2 DCH36119 EDCT controller, then go to encoding.

#### **Antenna, Low Noise Filter, Mixer, Band Pass Filters, and Modulator**

The FSK data is output from the EDCT controller chip, then input to transceiver IC DH24RF17B. The 2.4GHz modulated signals first mix with the 3.36GHz signal produced by MCD8825 (U2) PLL IC, 2SC5065 (Q8, Q3), 2C5594 (Q5) Local Oscillator, 3.36GHz Band Pass Filter (F3) in NESG2031 (Q4) Mixer to produce a 5.8GHz signal. The 5.8GHz signal then pass through the 5.8GHz Band Pass Filter (F1) before it pass the Buffer Amplifier constructed by Q6, Q7 NESG5594, and Q10 NESG2031. After that, it goes through a 5.8GHz Band Pass Filter (F4) and input to Murata XM5060PC Power Amplifier IC. Finally, after it passing a Low Pass Filter constructed by C23, C90 and C22, the RF signal propagate through a TX solid wire antenna (ANT1)

### **3. Telephone Line interface**

The telephone line interface circuit is established by below sections

#### **Line seize and isolation**

Line isolation is mainly preformed by Q13, Q10 and Q12. Q12 also has a function of controlling Line-seize. Both audio input and output will through Q13 and Q10.

**Ring detect circuit and Caller ID System.**

The ring signal and CID signals through C43, C44 (22n, 400V), R113 and R114 (470K ohm) input to U1 DCH36119 EDCT controller to demodulate the CID data then displayed on the Handset LCD display.