circuit is selected to the TX path. The output of the switch is connected to a 1.9 GHz printed lowpass filter. The printed low pass filter is further filter out harmonic content of the signal. The output of the printed LPF is routed to the antenna with a power level of ≤20.8 dBm conducted in to the antenna as per the FCC requirement.

2.5 RX CHAIN

The front end circuitry is the same as the TX Chain. The antenna is connected to the printed lowpass filter. The printed lowpass filter connects to the TX/RX Switch. In RX mode, R_ON goes high to switch the diode to RX path. The output of the switch fed into a balun to change the signal to differential-ended. Then it is connected to the LNA. The LNA input is differential and the LNA matching incorporates phase shifting and noise figure matching. The output of the LNA is connected to the input of the image reject mixer. The mixer achieves >35dB of image rejection. The mixer's LO is set by the VCO. The output of the mixer is at 864kHz, the IF frequency. The 864kHz output from the mixer is passed through an internal IF bandpass filter. The output of this filter connects to a limiter stage. The limiter amplifies the signal and its output connects to the demodulator. The demodulator FM demodulates the 864kHz to a baseband analogy signal. The recovered signal is fed through a low pass post detection filter. The recovered data is then separated to two paths. One is the data going directly to the data slicer. The second is the reference voltage for the data slicer. The 0101 preamble at the beginning of each RX slot is used to determine the average DC voltage of the incoming data. This voltage is charged on the reference capacitor, and locked by the falling edge of the SLICE signal.Once locked, this voltage is used by the data slicer as a reference to shape the data. The output of the data slicer is the signal that is delivered to the Baseband section.

3.0 SPECIAL DECLARATION

a. It does not use the provisions of 47CFR 15.323 (c) (6), random waiting mechanism is not used in this system.

b. The provisions of 47CFR 15.323 (c) (10) and 47CFR 15.323 (c) (11) are not used to extend the range of spectrum occupied over space or time for the purpose of denying fair access to spectrum to other devices.

c. Only the handset will act as the initiating device, which will initiate the establishment of the duplex connection.