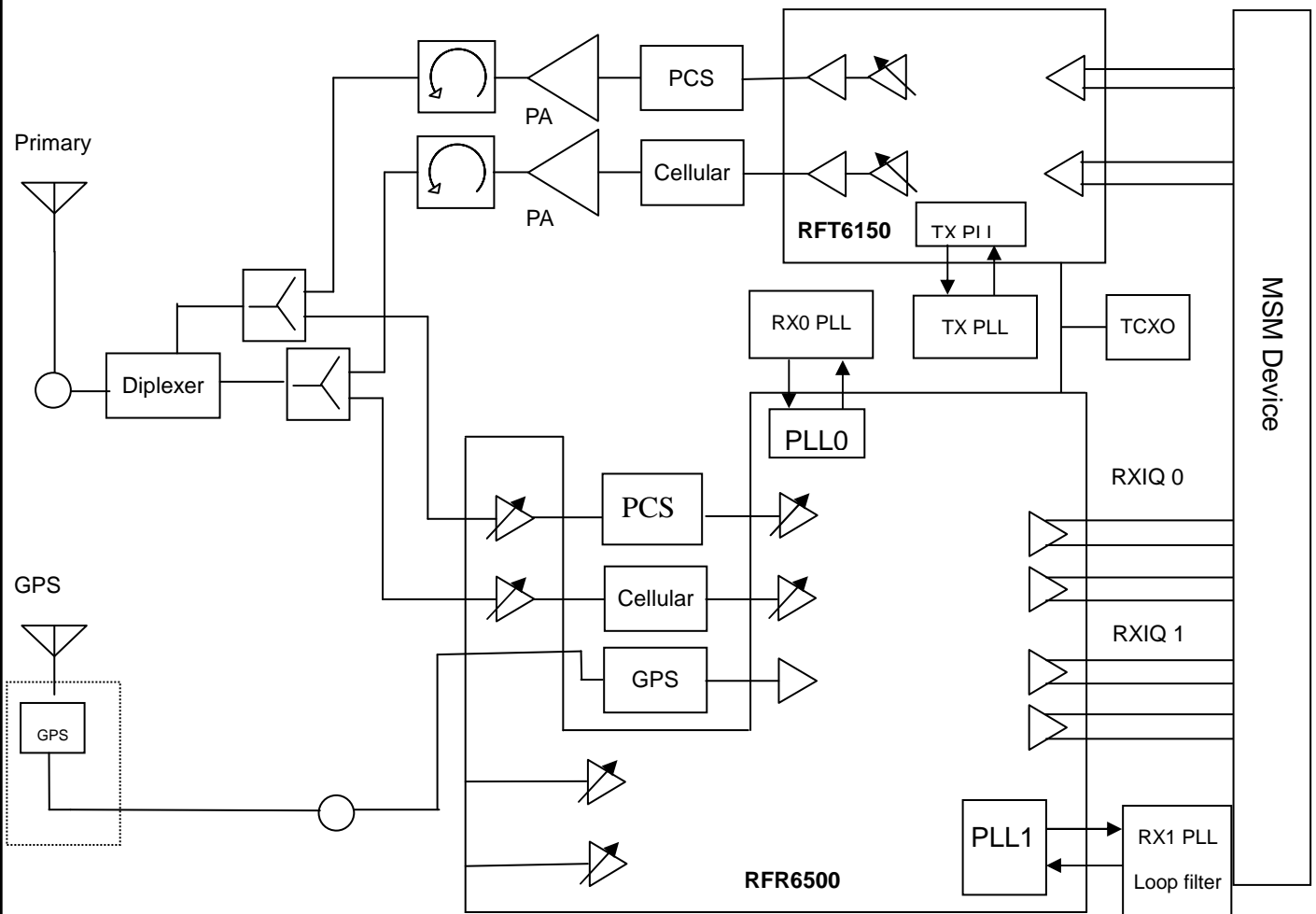


Vogue Block Diagram and Operational Description

Block Diagram

Block Diagrams for CDMA2000 RF section



Antennas

The primary for CDMA is of dual band internal type, while the individual one is of GPS own antenna.

RF connectors

The RF connector is used for CDMA in the primary receiver chain. It is used for more reliable and consistent measurements on RF performance. The RF connector, mounted on the PCB, is of

This specification is subject to change without notice

This confidential document is *High Tech. Corp* property and may not be copied or circulated without permission.

HTC CONFIDENTIAL

coaxial type with switching function. In normal mode when the plug is not connected, RF circuit is connecting with the external antenna. In test mode, when the plug of an RF cable is connected, the RF circuit is connecting with the RF cable.

The other RF connector is for the GPS function.

RF circuits

RF circuit consists of an RF transmitter, two power amplifier modules, an RF receiver, one diplexer, two duplexers.

RF transmit IC

The transmit IC includes an IQ modulator, LO generation and Distribution, one PLL circuit for generating TX LO, TX VCO circuit and other various control circuits. Transmit IC receives analog inputs and control signals from baseband chips and outputs RF signals to power amplifiers.

Power amplifier modules

Power amplifier module is used to amplify the RF signal from RF transmit IC to a suitable level meeting CDMA specifications.

RF receive IC

RF receive IC includes dual LNAs for Cellular and PCS bands, Rx LO generation and Distribution, low pass filter, on-chip VCOs for CDMA Rx and GPS, and control circuits. RF receive IC gets signals from the diplexer and duplexers, amplifies signals, and down-converts signals to output to baseband chip.

RF diplexer and duplexers

RF diplexer is used to split Cellular signals and PCS signals. Two duplexers are used for Cellular band and PCS band respectively. The duplexer is used to allow a transmitter operating on one frequency and a receiver operating on a different frequency to share one common antenna with a minimum of interaction and degradation of the different RF signals.

CDMA Principle

CDMA RF Specification

Complies with IS-98E and IS-866 standard for CDMA 1xRTT and 1xEVDO respectively.

Mobile supports dual band operation, Band Class 0 and Band Class 1.

Band Class:

Class 0 (Cellular band)

Transmit band: 824.7 – 848.37MHz

Receive band: 869.7 – 893.31MHz

Class 1 (PCS band)

Transmit band: 1851.25 – 1908.75MHz

Receive band 1931.25 – 1988.75MHz

Channel Spacing: 1.25MHz

Sensitivity performance –106 dBm/ 1.23 MHz

Mobile Station Class:

Class III for band class 0

Nominal maximum output power: 23 – 30dBm

Class II for band class 1

Nominal maximum output power: 23 – 30dBm

CDMA RF Operation Description

This product adopts Qualcomm RadioOne Direct conversion architecture.

Local Oscillators

19.2MHz clock frequency should be observed from VC-TCXO.

RF Transmitter IC

The output of transmitter should be within 824-849MHz for cellular band and within 1850-1910MHz for pcs band

RF Receiver IC

The input of receiver should be within 869-894MHz for cellular band and within 1930-1990MHz for pcs band