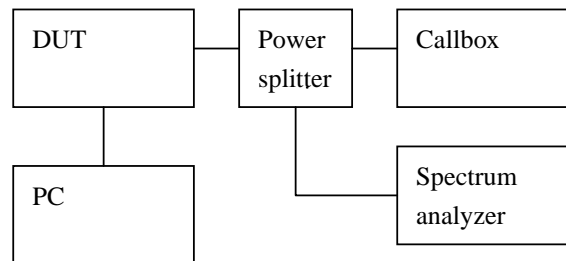Tuning Procedure

Please note:

1. The end user cannot tune or adjust output frequency or power level in any way. Frequency and power level are both controlled by software, as required by the CDMA cellular standard.
2. The voltage provided to the final PA stage is 3.0 V and the maximum current drawn is 900 mA

1: In FCC authorized lab, connect the DUT with callbox through a power splitter, the other port of splitter is connected to the spectrum to measure the Max power, Frequency error, etc…

2: DUT is controlled by the PC with the ETS tool, which is developed by VIA.
Test Setting is shown as below.

```
 ┌──────────┐    ┌──────────┐    ┌──────────┐
 │  DUT     │────│ Power    │────│ Callbox  │
 │          │    │ splitter │    │          │
 └────┬─────┘    └────┬─────┘    └──────────┘
      │               │
      │               │          ┌──────────┐
 ┌────┴─────┐         └──────────│ Spectrum │
 │  PC      │                    │ analyzer │
 │          │                    └──────────┘
 └──────────┘
```

3: Using ETS, Tx power can be set to the power level as what it can be on lab test requirement.
After the connection is setup, ETS Command is located at RF\CDMA\DSPM Tx AGC Config\
In the window,
Ctrl mode shall be set to Manual;
Method shall be set to HW Value;

HW value can be adjusted from 0x000 to 0xfff to get the power wanted.
Hyst State shall be set to mid Gain.
Power(dBm): do not need to care.

4: By ETS, Channel can be set to the target channel to perform the test.
After the connection is setup, ETS Command is located at RF\CP PSW PLL Channel Config\
In the window,
Ctrl mode shall be set to Manual
Band can be set to the band which is tested.
Channel can be set to the channel which is tested.

5: For CDMA and EVDO switch, below ETS command can be used

CP\VAL\PRI\Operating mode\CP Do Pref Mode Set&CP DO Hybrid Mode Set

In CP Dp Pref Mode Set window,
Op type shall be Parm Custom Value
Prefered Mode shall be CDMA only for CDMA 1X test and HDR only for EVDO test
In CP DO Hybrid Mode Set window,
Optype shall be set to Parm Custom Value
HybridMode shall be set to Non-Hybrid.

6: ETS is a tool which is developed by Via telecom, its name is engineering test system. With it, can spy the DUT's status and control the DUT to work in different mode.

Note: Conducted Tx power is designed to more than 23dBm.