Alignment Procedure and Specification

1. STANDARD TEST CONDITION
   1.1 RF input/output Impedance: 50 OHM
   1.2 RF cable: 0.7dB<cable loss<1dB, freq: 800MHz～2GHz
   1.3 DC power supply: DC 4.8V, within +/-10% ripple
   1.4 Radiated shielded test box: cable Loss: 25dB about (900MHz)
   1.5 RS232 level shift convert box
   1.6 Signal Generator:
      Output impedance: 50 OHM
      Output frequency range: 250KHz～3GHz
      Maximum Output Power: 14dBm
   1.7 Signal Analyzer
      Input impedance: 50 OHM
      Input frequency range: 9KHz～26.5GHz
      Maximum input power: within 30dBm
   1.8 Base station simulator:
      Input/Output impedance: 50 OHM
      RF Input/Output Level Range: -120dBm/1.23MHz to -20dBm/1.23MHz

2. Calibration and Performance Procedure
   2.1 Preparative
      2.1.1 Power on DUT (device under test), let it run into Factory Test Mode
      2.1.2 Conduct DUT to RF calibration system.
      2.1.3 Press mouse button and hit “start” menu to start calibration.
   2.2 Receiver Calibration:
      2.2.1 Digital voltage control amplifier gain offset tuning

      Limitation:2400～2900

      2.2.2 Low noise amplifier gain tuning

      Limitation: 140～170

      2.2.3 Low noise amplifier gain VS different frequency measurement

      Limitation:-15～＋15

      2.2.4 Set the AM modulation Signal on the DUT IN/OUT port , then

run IM2(2 step intermediation) calibration.

Limitation:0～3

2.3 Transmitter Calibration:

2.3.1 Transmitting power linearity tuning

Limitation: Offset 0～10
Slope 0～20

2.3.2 Transmitting power variations over different frequency

Limitation:－15～＋15

2.3.3 Transmitting high power detecting on reference channel

Expect Power	LL		UL
16.400	130	~	170
18.000	140	~	180
19.600	150	~	190
21.200	160	~	210
22.800	170	~	230
24.400	180	~	250
26.000	190	~	255
27.600	200	~	255
29.200	220	~	255
30.800	220	~	255
32.400	220	~	255
34.000	220	~	255
35.600	220	~	255
37.200	220	~	255
38.800	220	~	255
40.400	220		255

2.3.4 Transmitting high power detecting VS frequency

Limitation：-60～40

2.4 RF performance (The minimum standard for high volume production should be compliant with IS-98D spec)

2.4.1 Power on DUT, let it run to network searching mode

2.4.2 Conduct DUT to RF test system.

2.4.3 Press mouse button and hit “start” menu.

Test items are followed:

Receiver test:

- Receiver sensitivity and dynamic range
- Demodulation of Forward Traffic Channel in Additive White Gaussian Noise

Transmitter Test:

- Frequency accuracy, wave quality, time offset
- Open loop output power range
- Access probe output power
- Open loop output power time response
- Occupied band with
- Maximum RF output power
- Minimum RF output power
- Close loop output power range
- Transmitter conducted spurious emission

2.5 Electrostatic leakage test

2.5.1 Connect DUT with charger and power on DUT

2.5.2 Voltage meter check DUT ’ s surface electrostatic voltage within 5 V

Limitation: within DC 5V

2.6 Potential current test

2.6.1 Set DC power supply output 3.7V

2.6.2 Connect artificial battery to DUT

2.6.3 In power-off status, check input current with 1mA

Limitation: Within 1mA DC

2.7 Radiated sensitivity test

2.7.1 Power on DUT

2.7.2 Put DUT into radiated shielded box connected with base station simulator.

2.7.3 Set up data loop back

Minimum standard: -102dBm/1.23MHz,FER 0.5%, confidence 95%.

2.8 Calling test

2.8.1 Connect DUT with base station simulator via RF coupling cable.

2.8.2 Power on DUT

2.8.3 Set up voice loop back

2.8.4 Check receiver, microphone, buzzer and keypad function.
Minimum standard: -75dBm/1.23MHz.