FCC CFR47 CERTIFICATION

PART 24E

TEST REPORT

FOR

20W RF REPEATER SYSTEM

MODEL: YRRF-xx-1900-B3-DN (xx will be any alphaneumeric)

FCC ID: Q99L1900CDMA20R

REPORT NUMBER: 03I2052-1

ISSUE DATE: JUNE 31, 2003

Prepared for
YURASYS CO., LTD.
3F, SHINHO BUILDING, 906-16 DAECHI-DONG,
GANGNAM-GU, SEOUL, KOREA

Prepared by
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TABLE OF CONTENT

1. TEST RESULT CERTIFICATION

COMPANY NAME: YURASYS CO., LTD.
3F, SHINHO BUILDING, 906-16 DAECHI-DONG,
GANGNAM-GU, SEOUL, KOREA

EUT DESCRIPTION: 20W RF REPEATER SYSTEM

MODEM NAME: YRRF-xx-1900-B3-DN (xx will be any alphaneumeric)

DATE TESTED: JUNE 27 – JUNE 30, 2003

TYPE OF EQUIPMENT	INTENTIONAL RADIATOR
EQUIPMENT TYPE	1850-1910 MHz paired with 1930-1990 MHz (24)
MEASUREMENT PROCEDURE	ANSI 63.4 /2001, TIA/EIA 603
PROCEDURE	CERTIFICATION
FCC RULE	CFR 47 PART 24 Subpart E

Compliance Certification Services, Inc. tested the above equipment for compliance with the requirement set forth in CFR 47, 24 Subpart E-Broadband PCS. The equipment in the configuration described in this report, shows the measured emission levels emanating from the equipment do not exceed the specified limit.

Note : This document reports conditions under which testing was conducted and results of tests performed. This document may not be altered or revised in any way unless done so by Compliance Certification Services and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by Compliance Certification Services will constitute fraud and shall nullify the document.

Test By:

VIEN TRAN
EMC ENGINEER
COMPLIANCE CERTIFICATION SERVICES

Released For CCS By:

THU CHAN
EMC SUPERVISOR
COMPLIANCE CERTIFICATION SERVICES

2. EUT DESCRIPTION

This RF Repeater operates in the frequency range of 1900MHz. The RF is capable of handling CDMA modulation with a maximum power of 43dBm (20W) output power for down (forward) link and 30dBm (1W) output power for up (reverse) link.

3. TEST METHODOLOGY

Both conducted and radiated testing were performed according to the procedures documented on chapter 13 of ANSI C63.4 and FCC CFR 47 2.1046, 2.1047, 2.1049, 2.1051, 2.1053, 2.1055 and 2.1057.

4. TEST FACILITY

The open area test sites and conducted measurement facilities used to collect the radiated data are located at 561F Monterey Road, Morgan Hill, California, USA. The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 22.

5. ACCREDITATION AND LISTING

The test facilities used to perform radiated and conducted emissions tests are accredited by National Voluntary Laboratory Accreditation Program for the specific scope of accreditation under Lab Code: 200065-0 to perform Electromagnetic Interference tests according to FCC PART 15 AND CISPR 22 requirements. No part of this report may be used to claim or imply product endorsement by NVLAP or any agency of the US Government. In addition, the test facilities are listed with Federal Communications Commission (reference no: 31040/SIT (1300B3) and 31040/SIT (1300F2))

6. MEASURING INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment, which is traceable to recognized national standards.

7. APPLICABLE RULES

24.232- POWER LIMIT

24.232(a): Maximum Peak output power for base station transmitters should not exceed 100 Watts conducted and 1640W EIRP if antenna height up to 300 meters for Base Station, 2W EIRP for Mobile / Portable.

TYPE OF EMISSION

(F1A) CDMA 1900MHz

24.235- FREQUENCY STABILITY

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

24.238- EMISSION LIMITS

24.238(a): The magnitude of each spurious and harmonic emission that can be detected when the equipment is operated under conditions specified in the instruction manual and/or alignment procedure, shall not be less than 43+10 log (mean output power in watts) dBc below the mean power output outside a licensee's frequency block (-13dBm).

24.238(b) & (c);

(1) Compliance with the out-of-band emissions requirement is based on test being performed with 1MHz analyzer RES BW.

(2) At block edges, RES BW may be adjusted to a level at least as large as 1% of emission bandwidth. The emissions bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. For the EUT this is at least:

§2.1057- SPECTRUM RANGE TO BE INVESTIGATED

Lowest radio frequency signal generated in the equipment, without going below 9 kHz, up to at least the frequency shown below:

(1) If the equipment operates below 10 GHz: to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.

(2) If the equipment operates at or above 10 GHz and below 30 GHz:
to the fifth harmonic of the highest fundamental frequency or to 100 GHz, whichever is lower.

(3) If the equipment operates at or above 30 GHz: to the fifth harmonic of the highest fundamental frequency or to 200 GHz, whichever is lower.

(b) Particular attention should be paid to harmonics and sub-harmonics of the carrier frequency as well as to those frequencies removed from the carrier by multiples of the oscillator frequency.
Radiation at the frequencies of multiplier stages should also be checked.

(c) The amplitude of spurious emissions, which are attenuated more than 20 dB below the permissible value, need not be reported.

(d) Unless otherwise specified, measurements above 40 GHz shall be performed using a minimum resolution bandwidth of 1 MHz.

Spec limit: Frequency investigation range from 15M to tenth harmonic (i.e. 20 GHz.).

§PART 15 RADIATED EMISSION

NOT APPLICABLE. The accompany digital port is designed for using in set up only, not for daily operation and after set up no cable will be attached to this port.

8. TEST SETUP, PROCEDURE AND RESULT

8.1. SECTION 2.1046: RF POWER OUTPUT

INSTRUMENTS LIST

EQUIPMENT	MANUFACTURE	MODEL NO.	SERIAL NO.	CAL. DUE DATE
ESG-D Signal Generator	HP	E4432B	US38330679	9/5/04
PSA Series Spectrum Analyzer	Agilent	E4446A	US42070220	1/13/04
30W 20dB Attenuator	Bird Electronic	8343-200	970	N.C.R.

TEST SETUP

TEST PROCEDURE

The EUT was set to maximum output power (maximum gain). RF output power was measured with Spectrum Analyzer.

RESULT

Measured with Spectrum Analyzer. Set the power amplifier to the maximum output gain.

Downlink:

Channel	Frequency (GHz)	Conducted Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	1.930	43.09	50	-6.91
Middle	1.960	43.01	50	-6.99
High	1.990	43.10	50	-6.90

Uplink:

Channel	Frequency (GHz)	Conducted Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	1.850	29.91	50	-20.09
Middle	1.880	29.92	50	-20.08
High	1.910	29.99	50	-20.01

Note: EUT is a RF Repeater and it does not include an antenna.

Complies, please refer to the section 9.1 (measurement result plots) and attached files (downlink & uplink plots) for plots #1 - 3.

8.2. SECTION 2.1047: MODULATION CHARACTERISTICS

(NOT APPLICABLE TO THIS REPEATER, BECAUSE EUT PERMORMS ONLY FREQUENCY TRANSLATION.)

8.3. SECTION 2.1049: OCCUPIED BANDWIDTH

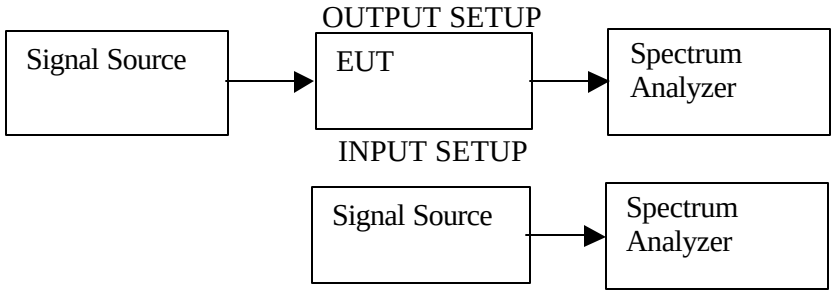
SECTION 2.1049(i)

Transmitters designed for other types of modulation – when modulated by an appropriate signal of sufficient amplitude to be representative of the type of service in which used. A description of the input signal should be supplied.

INSTRUMENTS LIST

EQUIPMENT	MANUFACTURE	MODEL NO.	SERIAL NO.	CAL. DUE DATE
ESG-D Signal Generator	HP	E4432B	US38330679	9/5/04
PSA Series Spectrum Analyzer	Agilent	E4446A	US42070220	1/13/04
30W 20dB Attenuator	Bird Electronic	8343-200	970	N.C.R.

TEST SETUP



TEST PROCEDURE

The EUT's occupied bandwidth output plot is compared with the input source plot to check that no distortion is created when the input signal is amplified by the EUT. Identical bandwidths, spans and center frequencies are used for both plots. Reference levels and attenuation are adjusted.

RESULT

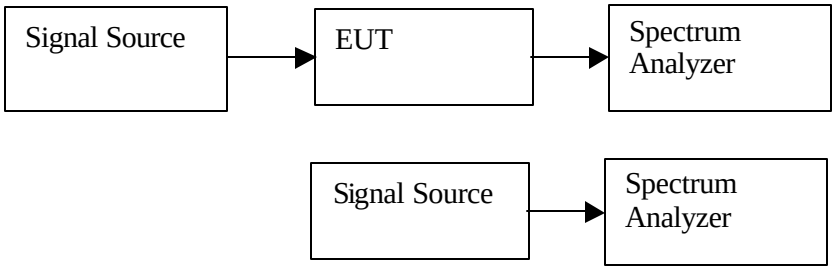
Complies, please refer to the section 9.1 (measurement result plots) and attached files (downlink & uplink plots) for plots #4 - 9.

8.4. SECTION 2.1051: SPURIOUS EMISSION AT ANTENNA TERMINAL

INSTRUMENTS LIST

EQUIPMENT	MANUFACTURE	MODEL NO.	SERIAL NO.	CAL. DUE DATE
ESG-D Signal Generator	HP	E4432B	US38330679	9/5/04
PSA Series Spectrum Analyzer	Agilent	E4446A	US42070220	1/13/04
30W 20dB Attenuator	Bird Electronic	8343-200	970	N.C.R.

TEST SETUP



TEST PROCEDURE

1) RF signal or three balanced signals (intermodulation measurement) were applied to the RF input. One set as close as possible to the bottom of the block edge and one set as close as possible to the top of the block edge. Set the RES BW to 1% of the emission bandwidth to show compliance with the –13dBm limit, in the 1 MHz bands immediately outside and adjacent to the top and bottom edges of the frequency block.

2) For the Out-of-Band measurements a 1 MHz RES BW was used to scan from 15 MHz to 10xfo of the fundamental carrier for all frequency block. A display line was placed at –13dBm to show compliance for spurious, harmonics, and intermodulation emissions.

3) 24.318(b) and also outside of which all emissions are attenuated at least 26 dB below the transmitter power.

RESULT

Complies, please refer to the section 9.1 (measurement result plots) and attached files (downlink & uplink plots) for plots #10 – 42.

8.5. SECTION 2.1053: FIELD STRENGTH OF SPURIOUS RADIATION

INSTRUMENTS LIST

EQUIPMENT	MANUFACTURE	MODEL NO.	CAL. DUE DATE
ESG-D Signal Generator	HP	E4432B	9/5/04
PSA Series Spectrum Analyzer	Agilent	E4446A	1/13/04
Amplifier	MITEQ	NSP2600-44	4/25/04
Bicon Antenna	Eaton	94455-1	3/6/04
LP Antenna	EMCO	3146	3/6/04
Tune Dipole	Compliance Design	Robert	5/15/04
Tx Horn Antenna	EMCO	3115	2/4/04
Rx Horn Antenna	EMCO	3115	2/4/04
HPF	MICROLAB	FH-1800H	N/A
HPF	MICROLAB	FH-2400H	N/A
50 ohm terminator	SHX	TF-5	N/A

Detector Function Setting of Test Receiver

Frequency Range (MHz)	Detector Function	Resolution Bandwidth	Video Bandwidth
Above 1000	☒ Peak ☐ Average	☒ 1 MHz ☐ 1 MHz	☒ 1 MHz ☐ 10 Hz

TEST SETUP

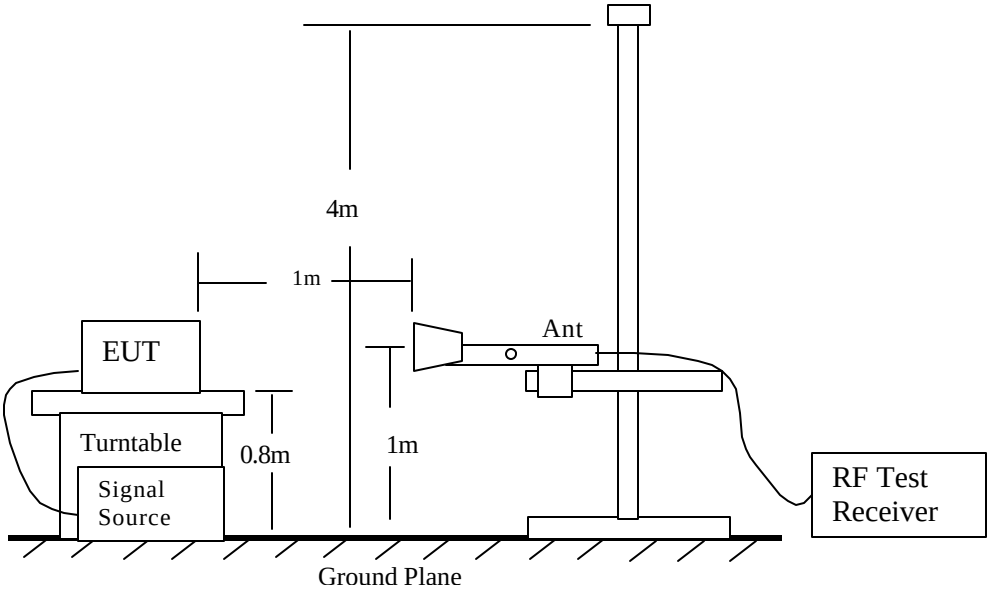


Fig 1: Radiated Emission Measurement

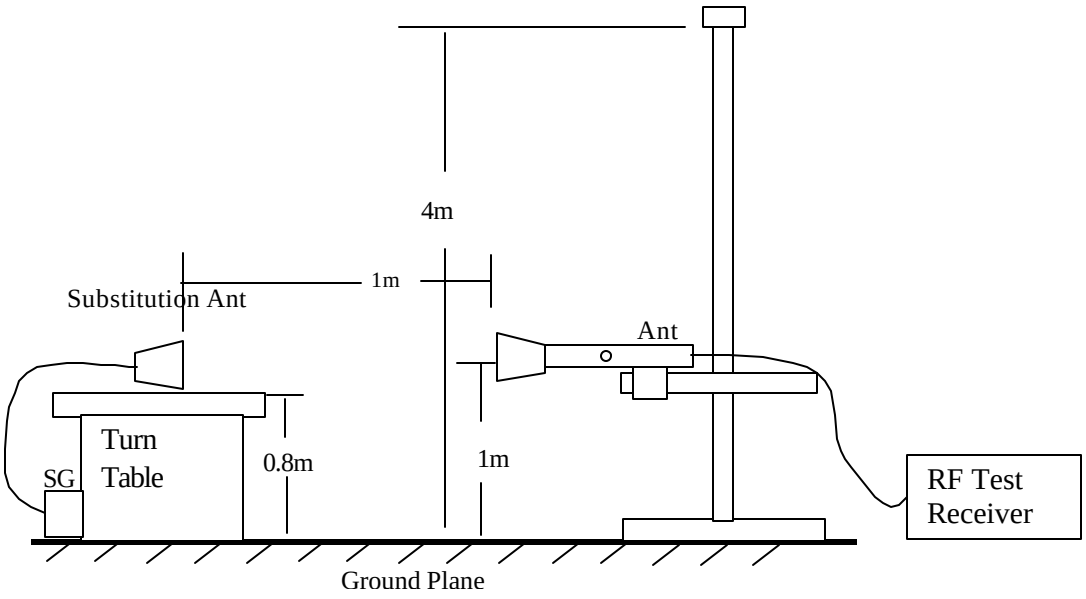


Fig 2: Radiated Emission – Substitution Method set-up

TEST PROCEDURE

1). On a test site, the EUT shall be placed on a turntable, and in the position closest to the normal use as declared by the user.
2). The test antenna shall be oriented initially for vertical polarization located 1m from the EUT to correspond to the frequency of the transmitter.
3). The output of the test antenna shall be connected to the measuring receiver and either a peak or average detector was used for the measurement as indicated on the report. The detector selection is based on how close the emission level was approaching the limit.
4). The transmitter shall be switched on, if possible, without the modulation and the measurement receiver shall be tuned to the frequency of the transmitter under test.
5). The test antenna shall be raised and lowered through the specified range of height until a maximum signal level is detected by the measuring receiver.
6). The transmitter shall than be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.
7). The test antenna shall be raised and lowered again through the specified range of height until a maximum signal level is detected by the measuring receiver.
8). The maximum signal level detected by the measuring receiver shall be noted.
9). The transmitter shall be replaced by a substitution antenna.
10). The substitution antenna shall be oriented for vertical polarization.

11). The substitution antenna shall be connected to a calibrated signal generator.
12). If necessary, the input attenuator setting of the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.
13). The test antenna shall be raised and lowered through the specified range of the height to ensure that the maximum signal is received.
14). The input signal to the substitution antenna shall be adjusted to the level that produces a level detected by the measuring receiver, that is equal to the level noted while the transmitter radiated power was measured, corrected for the change of input attenuation setting of the measuring receiver.
15). The input level to the substitution antenna shall be recorded as power level in dBm, corrected for any change of input attenuator setting of the measuring receiver.
16). The measurement shall be repeated with the test antenna and the substitution antenna oriented for horizontal polarization.
17). The measure of the effective radiated power is the larger of the two levels recorded, at the input to the substitution antenna, corrected for the gain of the substitution antenna if necessary.

RESULT

No non-compliance noted, as shown below

06/24/03 **High Frequency Measurement**

Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: VIEN TRAN
Project #: 03I2052-1
Company: YURASYS
EUT Descrip.: 20W RF REPEATER SYSTEM
EUT M/N:
Test Target: FCC PART 24
Mode Oper: DOWNLINK L/M/H CHANNELS _ SUBSTITUTION

Test Equipment:

EMCO Horn 1-18GHz	Pre-amplifer 1-26GHz	Spectrum Analyzer	Horn > 18GHz	Limit
T60: S/N: 2238 @1n	T63 Miteq 646456	Agilent E4446A Analyzer		FCC 24

Hi Frequency Cables

☑ (2 ft) ☐ (2 ~ 3 ft) ☐ (4 ~ 6 ft) ☑ (12 ft)

Peak Measurements:

Fundamental: RBW>99% or 26dB Emissions BW, VBW=RBW
Bandedge: RBW=>1% Emissions BW, VBW=> 3*RBW
Spurious: RBW=1MHz, VBW=1MHz

f GHz	SA reading (dBm)	SG reading (dBm)	CL (dB)	Gain (dBi)	Gain (dBd)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
LOW CH=1931.5MHz									
3.863	43.2	-66.04	0.5	9.0	6.8	-57.6	-13.0	-44.6	H
3.863	43.8	-67.97	0.5	9.0	6.8	-59.5	-13.0	-46.5	V
NO OTHER EMISSION FOUND AFTER 2nd HARMONIC									
MID CH=1960MHz									
3.920	43.2	-67.29	0.5	9.0	6.8	-58.8	-13.0	-45.8	H
3.920	53.3	-59.45	0.5	9.0	6.8	-51.0	-13.0	-38.0	V
NO OTHER EMISSION FOUND AFTER 2nd HARMONIC									
HI CH=1988.5MHz									
3.977	42.2	-69.37	0.5	9.0	6.9	-60.8	-13.0	-47.8	H
3.977	45.2	-64.60	0.5	9.0	6.9	-56.1	-13.0	-43.1	V
NO OTHER EMISSION FOUND AFTER 2nd HARMONIC									

06/24/03 **High Frequency Measurement**

Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: VIEN TRAN
Project #: 03I2052-1
Company: YURASYS
EUT Descrip.: 20W RF REPEATER SYSTEM
EUT M/N:
Test Target: FCC PART 24
Mode Oper: UPLINK L/M/H CHANNELS _ SUBSTITUTION

Test Equipment:

EMCO Horn 1-18GHz	Pre-amplifer 1-26GHz	Spectrum Analyzer	Horn > 18GHz	Limit
T60: S/N: 2238 @1n	T63 Miteq 646456	Agilent E4446A Analyzer		FCC 24

Hi Frequency Cables

☑ (2 ft) ☐ (2 ~ 3 ft) ☐ (4 ~ 6 ft) ☑ (12 ft)

Peak Measurements:

Fundamental:	Bandedge:	Spurious
RBW>99% or 26dB Emissions BW	RBW=>1% Emissions BW	RBW=1MHz
VBW=RBW	VBW=> 3*RBW	VBW=1MHz

f GHz	SA reading (dBm)	SG reading (dBm)	CL (dB)	Gain (dBi)	Gain (dBd)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
LOW CH=1851.5MHz									
3.703	41.8	-69.98	0.5	8.9	6.7	-61.6	-13.0	-48.6	H
3.703	42.0	-67.35	0.5	8.9	6.7	-59.0	-13.0	-46.0	V
NO OTHER EMISSION FOUND AFTER 2nd HARMONIC									
MID CH=1960MHz									
3.760	41.9	-69.42	0.5	8.9	6.7	-61.0	-13.0	-48.0	H
3.760	42.8	-66.33	0.5	8.9	6.7	-57.9	-13.0	-44.9	V
NO OTHER EMISSION FOUND AFTER 2nd HARMONIC									
HI CH=1908.5MHz									
3.817	41.8	-69.58	0.5	8.9	6.8	-61.1	-13.0	-48.1	H
3.817	43.0	-65.90	-0.5	8.9	6.8	-56.5	-13.0	-43.5	V
NO OTHER EMISSION FOUND AFTER 2nd HARMONIC									

8.6 SECTION 2.1055: FREQUENCY STABILITY

INSTRUMENTS LIST

EQUIPMENT	MANUFACTURE	MODEL NO.	SERIAL NO.	CAL. DUE DATE
ESG-D Signal Generator	HP	E4432B	US38330679	9/5/04
PSA Series Spectrum Analyzer	Agilent	E4446A	US42070220	1/13/04
30W 20dB Attenuator	Bird Electronic	8343-200	970	N.C.R.
Environment Chamber	Thermotron	SE 600-10-10	29800	4/26/04

Detector Function Setting of Test Receiver

Frequency Range (MHz)	Detector Function	Resolution Bandwidth	Video Bandwidth
Above 1000	Peak	300 Hz	300 Hz

TEST SETUP

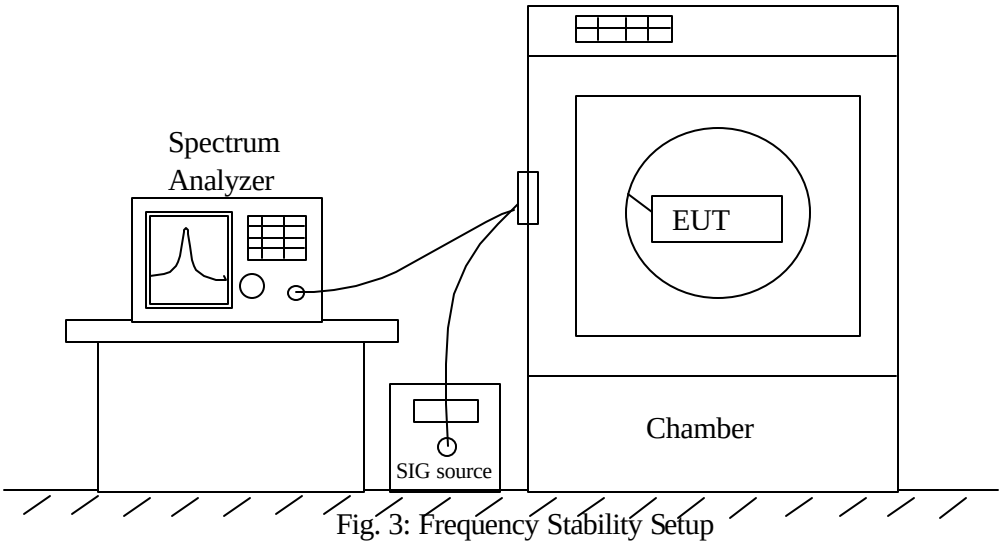


Fig. 3: Frequency Stability Setup

TEST PROCEDURE

- **Frequency stability versus environmental temperature**

1). Setup the configuration per figure 6 for frequencies measurement inside the environmental chamber. Set the temperature of the chamber to 25°C. Set SA Resolution Bandwidth low enough to obtain the desired frequency resolution and measure the EUT 25°C operating frequency as reference frequency.
2). Turn EUT off and set Chamber temperature to -30°C.
3). Allow sufficient time (approximately 20 to 30 minus after chamber reach the assigned temperature) for EUT to stabilize. Turn on EUT and measure the EUT operating frequency. Turn off EUT after the measurement.
4). Repeat step 3 with a 10°C increased per stage until the highest temperature of +50°C reached, record all measured frequencies on each temperature step.

- **Frequency stability versus AC input voltage**

1). Setup the configuration per figure 6 and set chamber temperature to 25°C. Use a variable AC power supply to power the EUT and set AC output voltage to EUT nominal input AC voltage. Set SA Resolution Bandwidth low enough to obtain the desired frequency resolution and measure the EUT 25°C operating frequency as reference frequency.
2). Slowly reduce the EUT input voltage to specified extreme voltage variation (±15%) and record the maximum frequency change.

RESULT

No non-compliance noted, as shown below

Downlink:

Reference Frequency: PCS Mid Channel 1960.000171MHz @ 25°C Limit: to stay ± 2.5 ppm = 4900.000 Hz				
Power Supply (Vac)	Environment Temperature (°C)	Frequency Deviation Measureed with Time Elapse (MHz)	Delta (ppm)	Limit (ppm)
120.00	50	1960.000157	0.007	± 2.5
120.00	40	1960.000155	0.008	± 2.5
120.00	30	1960.000148	0.012	± 2.5
120.00	***25***	***1960.000171***	***0***	***± 2.5***
120.00	20	1960.000151	0.010	± 2.5
120.00	10	1960.000154	0.009	± 2.5
120.00	0	1960.000146	0.013	± 2.5
120.00	-10	1960.000151	0.010	± 2.5
120.00	-20	1960.000158	0.007	± 2.5
120.00	-30	1960.000134	0.019	± 2.5

Reference Frequency: PCS Mid Channel 1960.000171MHz @ 25°C Limit: to stay ± 2.5 ppm = 4900.000 Hz				
Power Supply (Vac)	Environment Temperature (°C)	Frequency Deviation Measureed with Time Elapse (MHz)	Delta (ppm)	Limit (ppm)
120.00	***25***	***1960.000171***	***0***	***± 2.5***
35 (end point)	25	*1960.000166*	*0.003*	± 2.5
102	25	*1960.000168*	*0.002*	± 2.5
138	25	*1960.000173*	*-0.001*	± 2.5

Uplink:

Reference Frequency: PCS Mid Channel 1880.000170MHz @ 25°C Limit: to stay ± 2.5 ppm = 4700.000 Hz				
Power Supply (Vac)	Environment Temperature (°C)	Frequency Deviation Measureed with Time Elapse (MHz)	Delta (ppm)	Limit (ppm)
120.00	50	1880.000147	0.012	± 2.5
120.00	40	1880.000143	0.014	± 2.5
120.00	30	1880.000138	0.017	± 2.5
120.00	***25***	***1880.000170***	***0***	***± 2.5***
120.00	20	1880.000133	0.020	± 2.5
120.00	10	1880.000153	0.009	± 2.5
120.00	0	1880.000145	0.013	± 2.5
120.00	-10	1880.000150	0.011	± 2.5
120.00	-20	1880.000157	0.007	± 2.5
120.00	-30	1880.000133	0.020	± 2.5

Reference Frequency: PCS Mid Channel 1880.000170MHz @ 25°C Limit: to stay ± 2.5 ppm = 4700.000 Hz				
Power Supply (Vac)	Environment Temperature (°C)	Frequency Deviation Measureed with Time Elapse (MHz)	Delta (ppm)	Limit (ppm)
120.00	***25***	***1880.000170***	***0***	***± 2.5***
55 (end point)	25	*1880.000166*	*0.002*	± 2.5
102	25	*1880.000168*	*0.001*	± 2.5
138	25	*1880.000172*	*-0.001*	± 2.5

8.7 RADIATED EMISSION: part 15.209

NOT APPLICABLE. The accompany digital port is designed for using in set up only, not for daily operation, and after the set up no cable will be attached to this port.

9. ATTACHMENT

9.1 MEASUREMENT RESULT PLOTS

RESULT

The following table indicates the plot number associated with the Output Power, Occupied Bandwidth, Block Edges, Out-of-Band, and Inter-modulation for Low, Mid, & High channels.

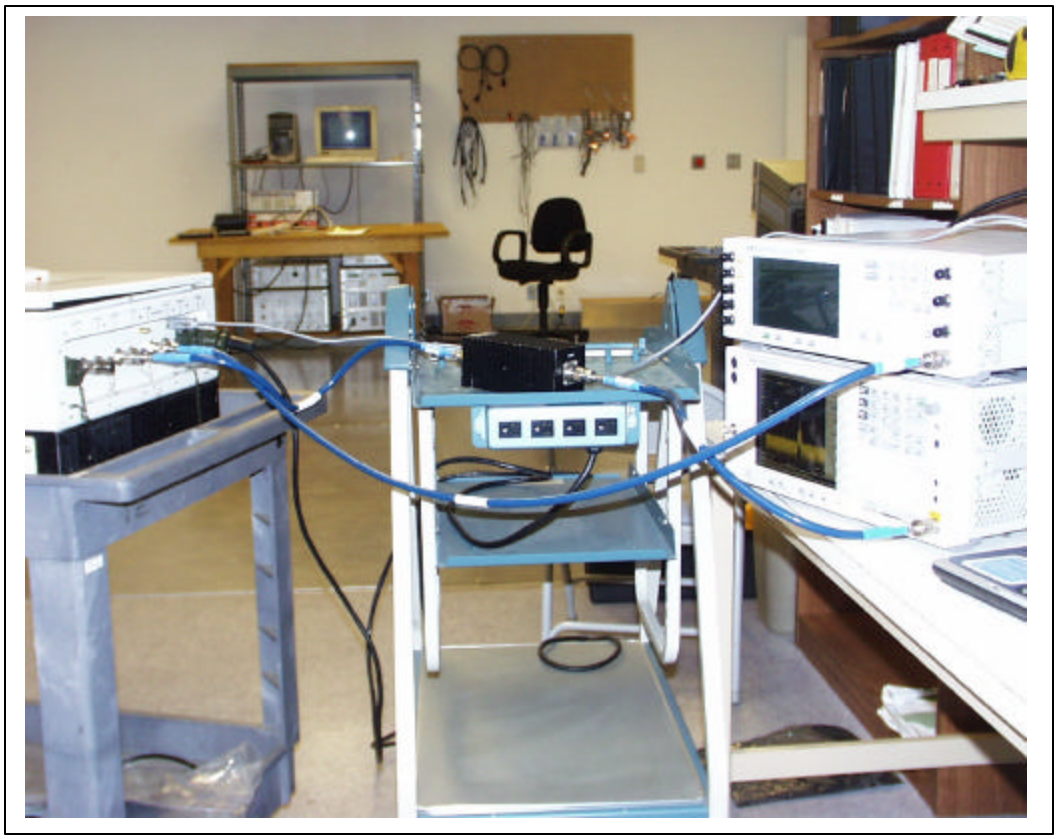
1900 MHz CDMA DOWNLINK BANDS A – F (1930 – 1990)		
Plot #	**Description**	**Frequency Range (MHz)**
1	Bottom Channel Output Power	1931.50
2	Mid Channel Output Power	1960
3	Hi Channel Output Power	1988.50
4	Bottom Channel Input Bandwidth	1931.50
5	Mid Channel Input Bandwidth	1960
6	Hi Channel Input Bandwidth	1988.50
7	Bottom Channel Output Bandwidth	1931.50
8	Mid Channel Output Bandwidth	1960
9	Hi Channel Output Bandwidth	1988.50
10	Bottom Channel Out-Of-Band	15 to 2900
11	Bottom Channel Out-Of-Band	2900 to 20000
12	Mid Channel Out-Of-Band	15 to 2900
13	Mid Channel Out-Of-Band	2900 to 20000
14	Hi Channel Out-Of-Band	15 to 2900
15	Hi Channel Out-Of-Band	2900 to 20000

1900 MHz CDMA DOWNLINK INTER-MODULATION BANDS A – F (1930 – 1990)		
Plot #	**Description**	**Frequency Range (MHz)**
16	Block A of Bottom Channel	Lower Band Edge
17	Block A of Bottom Channel Out-Of-Band	15 to 2900
18	Block A of Bottom Channel Out-Of-Band	2900 to 20000
19	Block A of Upper Channel	Upper Band Edge
20	Block A of Upper Channel Out-Of-Band	15 to 2900
21	Block A of Upper Channel Out-Of-Band	2900 to 20000
22	Block D Channel	Lower Band Edge
23	Block D Channel Out-Of-Band	15 to 2900
24	Block D Channel Out-Of-Band	2900 to 20000
25	Block B of Bottom Channel	Lower Band Edge
26	Block B of Bottom Channel Out-Of-Band	15 to 2900
27	Block B of Bottom Channel Out-Of-Band	2900 to 20000
28	Block B of Upper Channel	Upper Band Edge
29	Block B of Upper Channel Out-Of-Band	15 to 2900
30	Block B of Upper Channel Out-Of-Band	2900 to 20000
31	Block E Channel	Lower Band Edge
32	Block E Channel Out-Of-Band	15 to 2900
33	Block E Channel Out-Of-Band	2900 to 20000
34	Block F Channel	Lower Band Edge
35	Block F Channel Out-Of-Band	15 to 2900
36	Block F Channel Out-Of-Band	2900 to 20000
37	Block C of Bottom Channel	Lower Band Edge
38	Block C of Bottom Channel Out-Of-Band	15 to 2900
39	Block C of Bottom Channel Out-Of-Band	2900 to 20000
40	Block C of Upper Channel	Upper Band Edge
41	Block C of Upper Channel Out-Of-Band	15 to 2900
42	Block C of Upper Channel Out-Of-Band	2900 to 20000

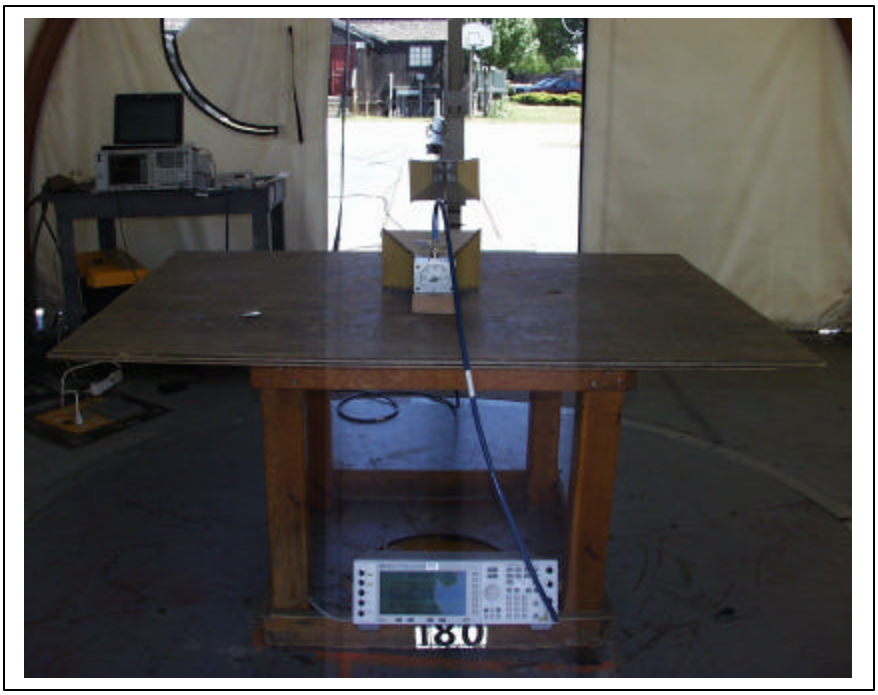
1900 MHz CDMA UPLINK BANDS A – F (1850 - 1910)		
Plot #	**Description**	**Frequency Range (MHz)**
1	Bottom Channel Output Power	1851.5
2	Mid Channel Output Power	1880
3	Hi Channel Output Power	1908.5
4	Bottom Channel Input Bandwidth	1851.5
5	Mid Channel Input Bandwidth	1880
6	Hi Channel Input Bandwidth	1908.5
7	Bottom Channel Output Bandwidth	1851.5
8	Mid Channel Output Bandwidth	1880
9	Hi Channel Output Bandwidth	1908.5
10	Bottom Channel Out-Of-Band	15 to 2900
11	Bottom Channel Out-Of-Band	2900 to 20000
12	Mid Channel Out-Of-Band	15 to 2900
13	Mid Channel Out-Of-Band	2900 to 20000
14	Hi Channel Out-Of-Band	15 to 2900
15	Hi Channel Out-Of-Band	2900 to 20000

1900 MHz CDMA UPLINK INTER-MODULATION BANDS A – F (1850 - 1910)		
Plot #	**Description**	**Frequency Range (MHz)**
16	Block A of Bottom Channel	Lower Band Edge
17	Block A of Bottom Channel Out-Of-Band	15 to 2900
18	Block A of Bottom Channel Out-Of-Band	2900 to 20000
19	Block A of Upper Channel	Upper Band Edge
20	Block A of Upper Channel Out-Of-Band	15 to 2900
21	Block A of Upper Channel Out-Of-Band	2900 to 20000
22	Block D Channel	Lower Band Edge
23	Block D Channel Out-Of-Band	15 to 2900
24	Block D Channel Out-Of-Band	2900 to 20000
25	Block B of Bottom Channel	Lower Band Edge
26	Block B of Bottom Channel Out-Of-Band	15 to 2900
27	Block B of Bottom Channel Out-Of-Band	2900 to 20000
28	Block B of Upper Channel	Upper Band Edge
29	Block B of Upper Channel Out-Of-Band	15 to 2900
30	Block B of Upper Channel Out-Of-Band	2900 to 20000
31	Block E Channel	Lower Band Edge
32	Block E Channel Out-Of-Band	15 to 2900
33	Block E Channel Out-Of-Band	2900 to 20000
34	Block F Channel	Lower Band Edge
35	Block F Channel Out-Of-Band	15 to 2900
36	Block F Channel Out-Of-Band	2900 to 20000
37	Block C of Bottom Channel	Lower Band Edge
38	Block C of Bottom Channel Out-Of-Band	15 to 2900
39	Block C of Bottom Channel Out-Of-Band	2900 to 20000
40	Block C of Upper Channel	Upper Band Edge
41	Block C of Upper Channel Out-Of-Band	15 to 2900
42	Block C of Upper Channel Out-Of-Band	2900 to 20000

9.2 EUT SETUP PHOTOS



RF CONDUCTED MEASUREMENT



RADIATED EMISSIONS MEASUREMENT

FREQUENCY TEMPERATURE MEASUREMENT

9.3 EUT PHOTOGRAPHS

9.3 INSTALLATION AND SERVICE MANUAL

9.4 SCHEMATIC, PART LISTS AND BLOCK DIAGRAM

9.5 PROPOSED FCC ID LABEL FORMAT

END OF REPORT