



Part 24 TEST REPORT

Product Name GPS Tracker

Model Name FJ110C

Brand Name FJ110C

FCC ID 2AHRH-FJ110C

Applicant Positioning Universal Inc

Manufacturer Fujiao Communications

Date of issue April 11, 2016

TA Technology (Shanghai) Co., Ltd.

Report No.: RXA1603-0044RF02 Page 2of 31

GENERAL SUMMARY

	FCC CFR47 Part 2 (2015) Frequency Allocations And Radio Treaty Matters; General Rules And Regulations			
Reference	FCC CFR47 Part 24E (2015) Personal Communications Services			
Standard(s)	ANSI/TIA-603-D(2010) Land mobile FM or PM Communications Equipment Measurements and Performance Standards.			
	KDB 971168 D01 Power Meas License Digital Systems v02r02 Measurement Guidance for Certification of Licensed Digital Transmitters			
Conclusion	This fixed wireless equipment has been measured in all cases requested by the relevant standards. Test results in Chapter 2 of this test report are below limits specified in the relevant standards. General Judgment: Pass			
Comment	The test result only responds to the measured sample.			

Approved by <u>*</u>

Revised by_

Performed by

Kai Xu Director Lingling Kang RF Manager Changxu Wan RF Engineer

TABLE OF CONTENT

1.	Ger	neral Information	4
	1.1.	Notes of the test report	4
	1.2.	Testing laboratory	5
	1.3.	Applicant Information	5
	1.4.	Manufacturer Information	5
	1.5.	Information of EUT	6
	1.6.	Test Date	6
2.	Tes	t Information	7
	2.1.	Summary of test results	7
	2.2.	RF Power Output	8
	2.3.	Effective Isotropic Radiated Power	10
	2.4.	Occupied Bandwidth	12
	2.5.	Band Edge Compliance	15
	2.6.	Peak-to-Average Power Ratio (PAPR)	17
	2.7.	Frequency Stability	19
	2.8.	Spurious Emissions at Antenna Terminals	21
	2.8	Radiates Spurious Emission	25
3.	Mai	n Test Instruments	29
A١	NEX	A: EUT Appearance and Test Setup	30
	A.1	EUT Appearance	
	A.2	Test Setup	31

Report No.: RXA1603-0044RF02 Page 4of 31

1. General Information

1.1. Notes of the test report

TA Technology (Shanghai) Co., Ltd. has obtained the accreditation of China National Accreditation Service for Conformity Assessment (CNAS), and accreditation number: L2264.

TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements. The site recognition number is 428261.

TA Technology (Shanghai) Co., Ltd. has been listed by industry Canada to perform electromagnetic emission measurement. The site recognition number is 8510A.

TA Technology (Shanghai) Co., Ltd. guarantees the reliability of the data presented in this test report, which is the results of measurements and tests performed for the items under test on the date and under the conditions stated in this test report and is based on the knowledge and technical facilities available at TA Technology (Shanghai) Co., Ltd. at the time of execution of the test.

TA Technology (Shanghai) Co., Ltd. is liable to the client for the maintenance by its personnel of the confidentiality of all information related to the items under test and the results of the test. The sample under test was selected by the Client. This report only refers to the item that has undergone the test.

This report standalone dose not constitute or imply by its own an approval of the product by the certification Bodies or competent Authorities. This report cannot be used partially or in full for publicity and/or promotional purposes without previous written approval of **TA Technology (Shanghai) Co., Ltd.** and the Accreditation Bodies, if it applies.

If the electrical report is inconsistent with the printed one, it should be subject to the latter.

Report No.: RXA1603-0044RF02 Page 5of 31

1.2. Testing laboratory

Company: TA Technology (Shanghai) Co., Ltd.

Address: No.145, Jintang Rd, Tangzhen Industry Park, Pudong

City: Shanghai
Post code: 201201
Country: P. R. China

Contact: Xu Kai

Telephone: +86-021-50791141/2/3

Fax: +86-021-50791141/2/3-8000 Website: http://www.ta-shanghai.com

E-mail: xukai@ta-shanghai.com

1.3. Applicant Information

Company: Positioning Universal Inc

Address: 4660 La Jolla Village DriveSuite 1100San DiegoCAUS

1.4. Manufacturer Information

Company: Fujiao Communications

Shanghai city xuhui district zhongshanwest road 2368, 1802 room.

PR.CHINA

Report No.: RXA1603-0044RF02 Page 6of 31

1.5. Information of EUT

General information

MEID:	A100003230B9D6			
Hardware Version:	P1			
Software Version:	1.1.67T	1.1.67T		
Antenna Type:	Internal Antenna			
Device Operating Configurations:				
Test Mode(s):	CDMA PCS:			
Support mode:	1x RTT			
Test Modulation:	QPSK			
Maximum E.I.R.P.	22.36 dBm			
Rated Power Supply Voltage:	12V			
Extreme Voltage:	Minimum: 6V M	aximum: 40V		
Extreme Temperature:	Lowest: -40°C	Highest: +80°C		
Test Channel: (Low - Middle - High)	25 - 600 - 1175	(CDMA PCS)	(tested)	
Operating Frequency Range(s)	Band	Tx (MHz)	Rx (MHz)	
Operating Frequency Natige(s)	CDMA PCS	1851.25 ~ 1908.75	1931.25 ~ 1988.75	

1.6. Test Date

The test is performed from March 21, 2016 to April 11, 2016.

Report No.: RXA1603-0044RF02 Page 7of 31

2. Test Information

2.1. Summary of test results

Number	Test Case	Clause in FCC rules	Verdict
1	RF power output	2.1046	PASS
2	Effective Isotropic Radiated power	24.232	PASS
3	Occupied Bandwidth	2.1049	PASS
4	Band Edge Compliance	24.238	PASS
5	Peak-to-Average Power Ratio	KDB 971168 D01(5.7)	PASS
6	Frequency Stability	2.1055 / 24.235	PASS
7	Spurious Emissions at Antenna Terminals	2.1051 / 24.238	PASS
8	Radiates Spurious Emission	2.1053 / 24.238	PASS

PASS: The EUT complies with the essential requirements in the standard.

FAIL: The EUT does not comply with the essential requirements in the standard.

Report No.: RXA1603-0044RF02 Page 8of 31

2.2. RF Power Output

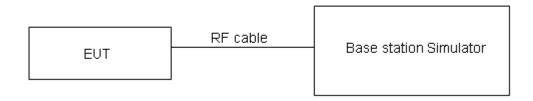
Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Methods of Measurement

During the process of the testing, The EUT is controlled by the Base Station Simulator to ensure max power transmission and proper modulation.

Test Setup



The loss between RF output port of the EUT and the input port of the tester has been taken into consideration.

Limits

No specific RF power output requirements in part 2.1046.

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U = 0.4 dB.

Report No.: RXA1603-0044RF02 Page 9of 31

Test Results

CDMA PCS		Condu	ucted Power(dBm	1)
		Channel 25	Channel 600	Channel 1175
		1851.25 (MHz)	1880 (MHz)	1908.75 (MHz)
SO32	+F-SCH	23.18	23.12	22.62
3032	+SCH	22.96	22.74	22.64

Note:

- 1) The maximum RF Output Power numbers are marks in bold.
- 2) The following testing is set to +F-SCH based on the maximum RF Output Power.

Report No.: RXA1603-0044RF02 Page 10of 31

2.3. Effective Isotropic Radiated Power

Ambient condition

Temperature	Relative humidity
21°C ~25°C	40%~60%

Methods of Measurement

The measurement procedures in TIA- 603D are used.

- 1. The EUT was placed on a turntable with 1.5 meter height in a fully anechoic chamber.
- 2. The EUT was set at 3 meters from the receiving antenna, which was mounted on the antenna tower
- 3. GSM operating modes: Set RBW= 1MHz, VBW= 3MHz, RMS detector over burst; UMTS operating modes: Set RBW= 100 KHz, VBW= 300 KHz, RMS detector over frame, and use channel power option with bandwidth=5MHz, per section 4.0 of KDB 971168 D01.
- 4. The table was rotated 360 degrees to determine the position of the highest radiated power.
- 5. The height of the receiving antenna is adjusted to look for the maximum ERP/EIRP.
- 6. Taking the record of maximum ERP/EIRP.
- 7. A dipole antenna was substituted in place of the EUT and was driven by a signal generator.
- 8. The conducted power at the terminal of the dipole antenna is measured.
- 9. Repeat step 3 to step 5 to get the maximum ERP/EIRP of the substitution antenna.
- 10. ERP/EIRP = Ps + Et Es + Gs = Ps + Rt Rs + Gs

Ps (dBm): Input power to substitution antenna.

Gs (dBi or dBd): Substitution antenna Gain.

Et = Rt + AF

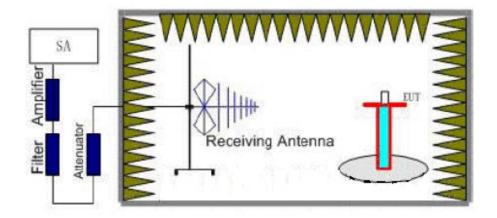
Es = Rs + AF

AF (dB/m): Receive antenna factor

Rt: The highest received signal in spectrum analyzer for EUT.

Rs: The highest received signal in spectrum analyzer for substitution antenna.

Test Setup



Report No.: RXA1603-0044RF02 Page 11of 31

Limits

Rule Part 24.232(b) specifies that "Mobile/portable stations are limited to 2 watts EIRP. Peak power" and Rule Part 24.232(c) specifies that "Peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage".

Limit (EIRP)	≤ 2 W (33 dBm)
LIIIII (EIRP)	

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U = 1.19 dB

Test Results:Pass

Mode	Channel	Polarization	Rt (dBm)	Rs (dBm)	Ps (dBm)	Gs (dBi)	E.I.R.P. (dBm)
	25	Vertical	-36.81	-53.71	0	1.92	18.82
	600	Vertical	-37.71	-53.91	0	1.94	18.14
CDMA DCC	1175	Vertical	-39.31	-54.55	0	1.92	17.16
CDMA PCS	25	Horizontal	-33.35	-53.19	0	1.92	21.76
	600	Horizontal	-33.00	-53.42	0	1.94	22.36
	1175	Horizontal	-34.70	-53.64	0	1.92	20.86

Note: 1. EIRP= E.R.P+2.15

Report No.: RXA1603-0044RF02 Page 12of 31

2.4. Occupied Bandwidth

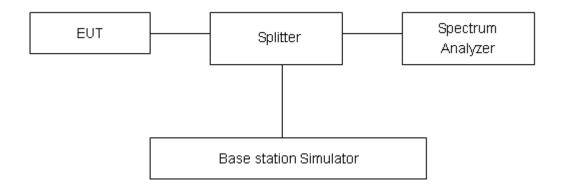
Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The occupied bandwidth is measured using spectrum analyzer. RBW is set to 15kHz, VBW is set to 51kHz for CDMA PCS. 99% power and -26dBc occupied bandwidths are recorded. Spectrum analyzer plots are included on the following pages.

Test Setup



Limits

No specific occupied bandwidth requirements in part 2.1049.

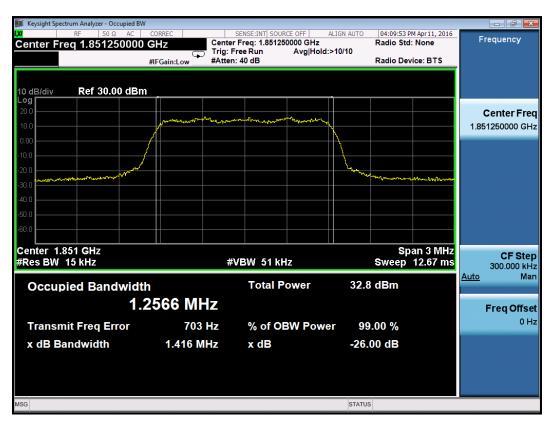
Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U = 624Hz.

Report No.: RXA1603-0044RF02 Page 13of 31

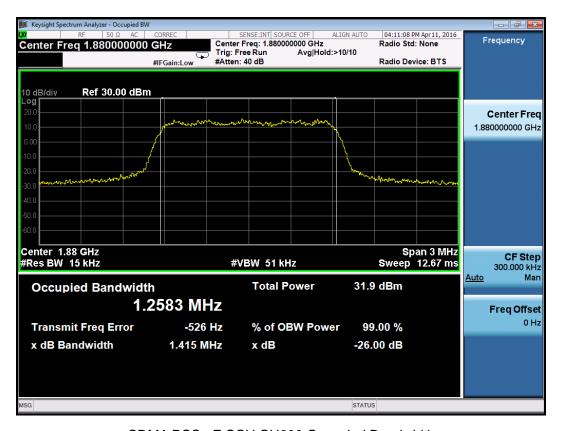
Test Result

CDMA PCS	Channel	Frequency (MHz)	99% Power Bandwidth (MHz)	-26dBc Bandwidth(MHz)
	25	1851.25	1.2566	1.416
+F-SCH	600	1880.0	1.2583	1.415
	1175	1908.75	1.2553	1.417

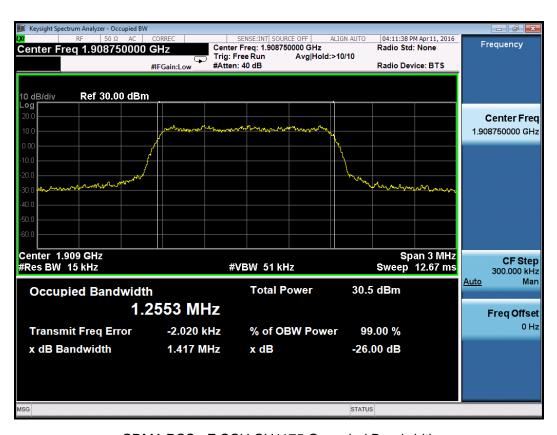


CDMA PCS +F-SCH CH25 Occupied Bandwidth

Report No.: RXA1603-0044RF02 Page 14of 31



CDMA PCS +F-SCH CH600 Occupied Bandwidth



CDMA PCS +F-SCH CH1175 Occupied Bandwidth

Report No.: RXA1603-0044RF02 Page 15of 31

2.5. Band Edge Compliance

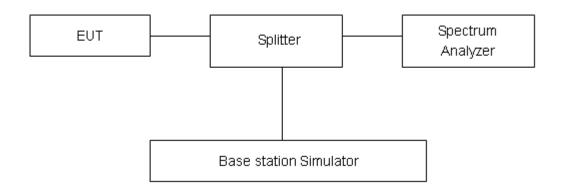
Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The band edge of the lowest and highest channels were measured. The Average detector is used and RBW is set to 15kHz, VBW is set to 51kHz for CDMA PCS. Spectrum analyzer plots are included on the following pages.

Test Setup



Limits

Rule Part 24.238(a) specifies that "on any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power (P) by at least 43 + 10 log10 (P) dB."

Limit	-13 dBm
Limit	- 13 UDIII

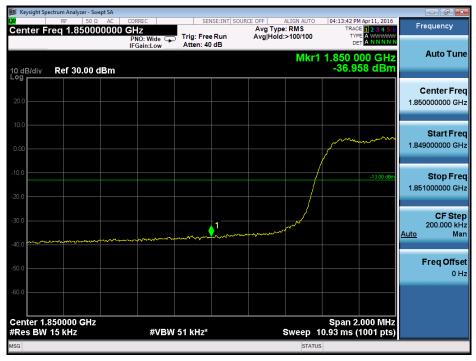
Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 1.96, U=0.684dB.

Report No.: RXA1603-0044RF02 Page 16of 31

Test Result:

CDMA PCS	Carrier frequency (MHz)	Reference value (dBm)	Limit	Conclusion
+F-SCH	1850.0	-36.958	-13	PASS
+r-3CH	1910.0	-37.578	-13	PASS



CDMA PCS +F-SCH 25 Channel



CDMA PCS +F-SCH 1175 Channel

Report No.: RXA1603-0044RF02 Page 17of 31

2.6. Peak-to-Average Power Ratio (PAPR)

Ambient condition

Temperature	Relative humidity
21°C ~25°C	40%~60%

Methods of Measurement

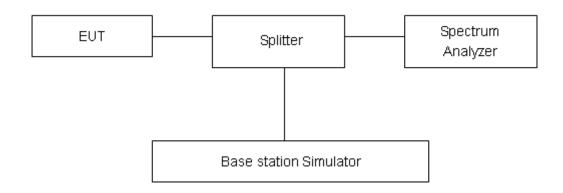
The measurement procedures in KDB971168 are used.

The inherent randomness of the power peaks in a noise-like signal makes it difficult to quantify the peak power using traditional measurement techniques for determining the peak power of an analog signal. The peak power of a digitally-modulated signal is predictable only on a statistical basis. Thus, for these types of signals, a statistical measurement of the peak power is necessary.

Power Complementary Cumulative Distribution Function (CCDF) curves provide a means for characterizing the power peaks of a digitally modulated signal on a statistical basis. A CCDF curve depicts the probability of the peak signal amplitude exceeding the average power level. Most contemporary measurement instrumentation include the capability to produce CCDF curves for an input signal provided that the instrument's resolution bandwidth can be set wide enough to accommodate the entire input signal bandwidth.

- Step 1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
- Step 2. Set the CCDF option in Spectrum analyzer.
- Step 3. Record the maximum PAPR level associated with a probability of 0.1%.

Test Setup



Limits

No specific Peak-to-Average Ratio requirements in KDB 971168.

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U = 0.4 dB.

Report No.: RXA1603-0044RF02 Page 18of 31

Test Result:

Mode	Channel	Frequency (MHz)	Test Result(dB)
	25	1851.25	3.72
+F-SCH	600	1880.0	3.92
	1175	1908.75	3.86

Report No.: RXA1603-0044RF02 Page 19of 31

2.7. Frequency Stability

Ambient condition

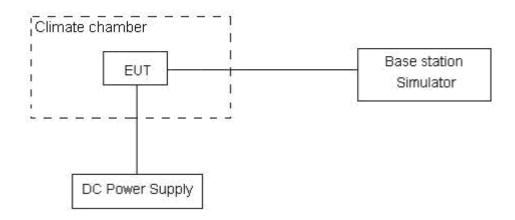
Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

- 1. Frequency Stability (Temperature Variation)
 - The temperature inside the climate chamber is varied from -40°C to +80°C in 10°C step size,
 - (1) With all power removed, the temperature was decreased to -40°C and permitted to stabilize for three hours.
 - (2) Measure the carrier frequency with the test equipment in a "call mode". These measurements should be made within 1 minute of powering up the mobile station, to prevent significant self warming.
 - (3) Repeat the above measurements at 10°C increments from -40°C to +80°C. Allow at least 1.5 hours at each temperature, un-powered, before making measurements.
- 2. Frequency Stability (Voltage Variation)
 - The frequency stability shall be measured with variation of primary supply voltage as follows:
 - (1) Vary primary supply voltage from 85 to 115 percent of the nominal value for other than hand carried battery equipment.
 - (2) For hand carried, battery powered equipment, reduce primary supply voltage to the battery-operating end point which shall be specified by the manufacturer.

This transceiver is specified to operate with an input voltage of between 6 V and 40 V, with a nominal voltage of 12V.

Test setup



Report No.: RXA1603-0044RF02 Page 20of 31

Limits

No specific frequency stability requirements in part 24.235

Measurement Uncertainty

The assessed measurement uncertainty to ensure 99.75% confidence level for the normal distribution is with the coverage factor k = 3, U = 0.01ppm.

Test Result

	Test Results (ppm) / 12 V Power supply
Temperature (°C)	Channel 600
(3)	+F-SCH
-40	-0.005521277
-30	-0.005824468
-20	-0.006159574
-10	-0.006037234
0	-0.00587234
10	-0.006154255
20	-0.006085106
30	-0.005930851
40	-0.006446809
50	-0.006414894
60	-0.006042553
70	-0.006691489
80	-0.006611702

V 16	Test Results(ppm) / 20°C
Voltage (V)	Channel 600
(*)	+F-SCH
6	-0.006670213
12	-0.006085106
40	-0.008765957

Report No.: RXA1603-0044RF02 Page 21of 31

2.8. Spurious Emissions at Antenna Terminals

Ambient condition

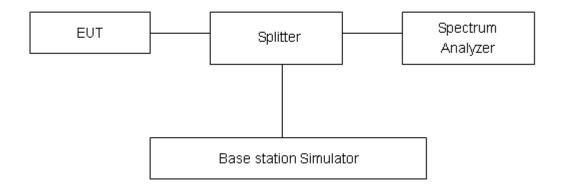
Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

The EUT was connected to Spectrum Analyzer and Base Station Simulator via power Splitter. The measurement is carried out using a spectrum analyzer. The spectrum analyzer scans from 30MHz to the 10th harmonic of the carrier. For CDMA PCS, RBW and VBW are set to 100 kHz, Sweep is set to ATUO.

Of those disturbances below (limit – 20 dB), the mark is not required for the EUT.

Test setup



Limits

Rule Part 24.238(a) specifies that "on any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power (P) by at least 43 + 10 log10 (P) dB."

|--|

Measurement Uncertainty

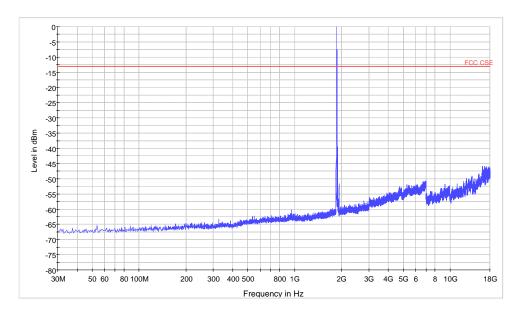
The assessed measurement uncertainty to ensure 99.75% confidence level for the normal distribution is with the coverage factor k = 1.96.

Frequency	Uncertainty
100kHz-2GHz	0.684 dB
2GHz-18GHz	1.407 dB

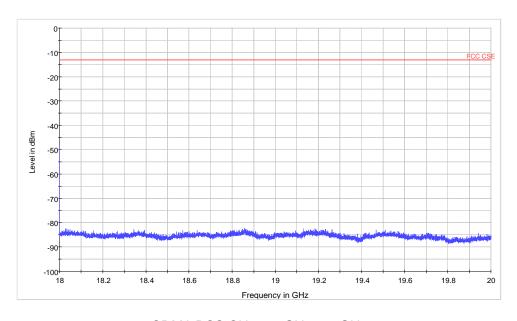
Report No.: RXA1603-0044RF02 Page 22of 31

Test Result

CDMA PCS CH25



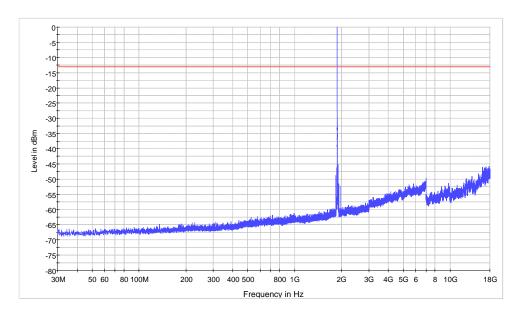
Note: The signal beyond the limit is carrier. CDMA PCS CH25 30MHz~18GHz



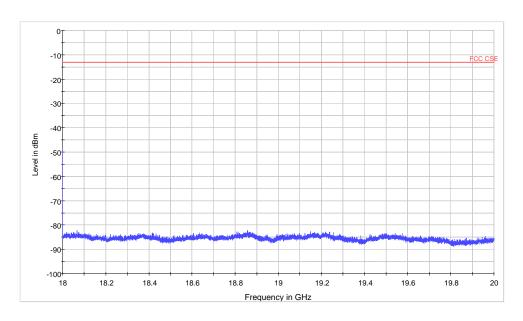
CDMA PCS CH25 18GHz ~20GHz

Report No.: RXA1603-0044RF02 Page 23of 31

CDMA PCS CH600



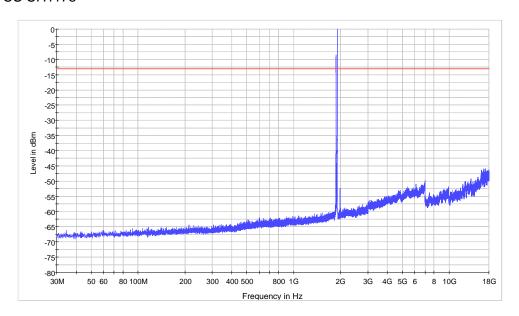
Note: The signal beyond the limit is carrier. CDMA PCS CH600 30MHz~18GHz



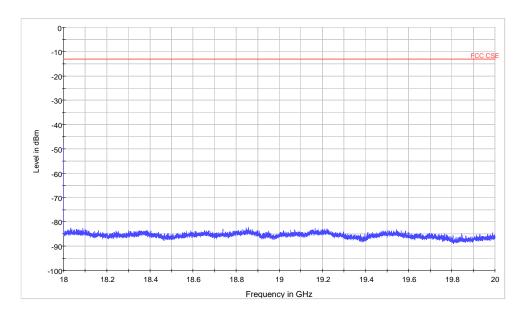
CDMA PCS CH600 18GHz ~20GHz

Report No.: RXA1603-0044RF02 Page 24of 31

CDMA PCS CH1175



Note: The signal beyond the limit is carrier. CDMA PCS CH1175 30MHz~18GHz



CDMA PCS CH1175 18GHz ~20GHz

Report No.: RXA1603-0044RF02 Page 25of 31

2.8 Radiates Spurious Emission

Ambient condition

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

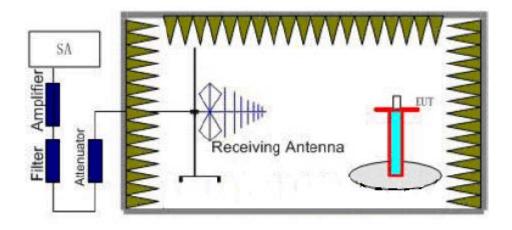
The measurements procedures in TIA -603D are used.

The spectrum was scanned from 30 MHz to the 10th harmonic of the highest frequency generated within the equipment.

The procedure of Radiates Spurious Emission is as follows:

Step 1:

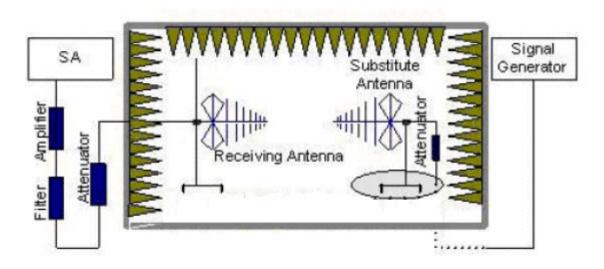
The measurement is carried out in the semi-anechoic chamber. EUT was placed on a 1.5 meters high non-conductive table at a 3 meters test distance from the test receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT. A radio link shall be established between EUT and Tester. The output power of the cell signal of the tester will be decreased until the output power of the EUT reach a maximum value. A peak detector is used while RBW and VBW are both set to 3MHz. During the measurement, the highest emission was recorded from analyzer power level (LVL) from the 360 degrees rotation of the turntable and the test antenna moved up and down over a range from 1 to 4 meters in both horizontally and vertically polarized orientations. The test setup refers to figure below.



Step 2:

A dipole antenna shall be substituted in place of the EUT. The antenna will be driven by a signal generator with a adjustable S.G. applied through a Tx cable. Adjust the level of the signal generator output until the value of the receiver reach the previously recorded analyzer power level (LVL). Then The E.R.P. /E.I.R.P. of the EUT can be calculated through the level of the signal generator, Tx cable loss and the gain of the substitution antenna. The test setup refers to figure below.

Report No.: RXA1603-0044RF02 Page 26of 31



E.R.P (peak power) =S.G. - Tx Cable loss + Substitution antenna gain – 2.15. EIRP= E.R.P+2.15

The field strength of spurious emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The worst emission was found in stand-up position (Z axis) and the antenna is vertical.

Of those disturbances below (limit – 20 dB), the mark is not required for the EUT.

Limits

Rule Part 24.238(a) specifies that "on any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power (P) by at least 43 + 10 log10 (P) dB."

Limit -13 dBm

Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 1.96, U = 3.55 dB.

Report No.: RXA1603-0044RF02 Page 27of 31

Test Result

CDMA Cellular CH1013

Harmonic	TX ch.1013 Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1649.6	-45.21	2	10.15	Vertical	-46.45	-13	33.45	270
3	2474.1	-66.74	2.51	11.35	Vertical	-60.05	-13	47.05	0
4	3478.5	-64.45	4.2	10.85	Vertical	-46.26	-13	33.26	225
5	4123.5	-62.89	5.2	11.35	Vertical	-58.89	-13	45.89	90
6	4947.4	-63.43	5.5	11.95	Vertical	-50.39	-13	37.39	225
7	5774.6	-61.76	5.7	13.55	Vertical	-42.59	-13	29.59	315
8	6594.8	-61.10	6.3	13.75	Vertical	-46.93	-13	33.93	270
9	7419.4	-61.08	6.8	13.85	Vertical	-48.08	-13	35.08	180
10	8249.6	-61.86	6.9	14.25	Vertical	-39.76	-13	26.76	270

Note: 1. The other Spurious RF Radiated emissions level is no more than noise floor.

2.We tested the vertical and horizontal polarization in the preliminary test and the vertical polarization are selected as the worst condition,

CDMA Cellular CH384

Harmonic	TX ch.384 Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1672.3	-50.43	2	10.75	Vertical	-39.66	-13	26.66	180
3	2509.56	-62.78	2.51	11.05	Vertical	-56.39	-13	43.39	0
4	3526.2	-64.61	4.2	11.15	Vertical	-46.24	-13	33.24	180
5	4182.6	-62.67	5.2	11.15	Vertical	-58.87	-13	45.87	90
6	5019.12	-61.23	5.5	11.95	Vertical	-56.93	-13	43.93	0
7	5856.8	-62.70	5.7	13.55	Vertical	-42.48	-13	29.48	315
8	6694.1	-61.77	6.3	13.75	Vertical	-48.78	-13	35.78	270
9	7528.68	-60.26	6.8	13.85	Vertical	-55.36	-13	42.36	0
10	8365.9	-61.88	6.9	14.25	Vertical	-49.23	-13	36.23	270

Note: 1. The other Spurious RF Radiated emissions level is no more than noise floor.

2.We tested the vertical and horizontal polarization in the preliminary test and the vertical polarization are selected as the worst condition,

Report No.: RXA1603-0044RF02 Page 28of 31

CDMA Cellular CH777

Harmonic	TX ch.777 Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	1697.1	-55.04	2	10.15	Vertical	-40.51	-13	27.51	270
3	2544.93	-56.6	2.51	11.05	Vertical	-50.21	-13	37.21	0
4	3573.0	-64.16	4.2	11.15	Vertical	-45.37	-13	32.37	0
5	4241.55	-61.50	5.2	11.15	Vertical	-57.70	-13	44.70	180
6	5089.86	-62.89	5.5	11.95	Vertical	-58.59	-13	45.59	90
7	5936.3	-63.04	5.7	13.55	Vertical	-45.31	-13	32.31	0
8	6786.48	-60.84	6.3	13.75	Vertical	-55.54	-13	42.54	270
9	7632.8	-60.52	6.8	13.85	Vertical	-47.67	-13	34.67	45
10	8483.3	-62.22	6.9	14.25	Vertical	-49.65	-13	36.65	225

Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor.

^{2.}We tested the vertical and horizontal polarization in the preliminary test and the vertical polarization are selected as the worst condition,

Report No.: RXA1603-0044RF02 Page 29of 31

3. Main Test Instruments

Name	Туре	Manufacturer	Serial Number	Calibration Date	Expiration Time	Valid Period
Base Station Simulator	CMU200	R&S	118133	2015-5-22	2016-5-21	1 year
Power Splitter	SHX-GF2-2 -13	Hua Xiang	10120101	NA	NA	NA
Spectrum Analyzer	E4445A	Agilent	MY46181146	2015-5-22	2016-5-21	1 year
Universal Radio Communication Tester	E5515C	Agilent	MY48367192	2015-5-22	2016-5-21	1 year
Signal Analyzer	FSV30	R&S	100815	2015-12-17	2016-12-16	1 year
Signal generator	SMB 100A	R&S	102594	2015-05-22	2016-5-21	1 year
EMI Test Receiver	ESCI	R&S	100948	2015-05-22	2016-5-21	1 year
Trilog Antenna	VUBL 9163	SCHWARZBE CK	9163-201	2014-12-06	2017-12-05	3 years
Trilog Antenna	VUBL 9163	SCHWARZBE CK	9163-391	2014-12-06	2017-12-05	3 years
Horn Antenna	HF907	R&S	100126	2014-12-06	2017-12-05	3 years
Horn Antenna	HF907	R&S	100125	2014-12-06	2017-12-05	3 years
Climatic Chamber	PT-30B	Re Ce	20101891	2015-7-18	2018-7-17	3 years
Horn Antenna	3160-09	ETS-Lindgren	00102643	2015-1-30	2018-1-29	3 years
Horn Antenna	3160-09	ETS-Lindgren	00102644	2015-1-30	2018-1-29	3 years
RF Cable	SMA 15cm	Agilent	0001	2016-03-09	2016-05-08	2 months

*****END OF REPORT *****

Report No.: RXA1603-0044RF02 Page 30of 31

ANNEX A: EUT Appearance and Test Setup

A.1 EUT Appearance



Picture 1 EUT and Auxiliary

Report No.: RXA1603-0044RF02 Page 31of 31

A.2 Test Setup



Picture 2: Radiated Spurious Emissions Test setup