TESTING
No. L2264

Part 24

TEST REPORT

Product Name	CDMA alarm device w/GPS receiver
Model Name	DS600
FCC ID	2AF36-DS600
Applicant	Mobilelock LLC
Manufacturer	Asiatelco Technologies Co
Date of issue	March 9, 2016

TA Technology (Shanghai) Co., Ltd.

GENERAL SUMMARY

Reference Standard(s)	**FCC CFR47 Part 2 (2014)** Frequency Allocations And Radio Treaty Matters; General Rules And Regulations **FCC CFR47 Part 24E (2014)** Personal Communications Services **ANSI/TIA-603-D(2010)** Land mobile FM or PM Communications Equipment Measurements and Performance Standards. **ANSI C63.4:2014** Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz **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 Kai Xu	**Revised by** Lingling Kang	**Performed by** Changxu Wan
Kai Xu	Lingling Kang	Changxu Wan
Director	RF Manager	RF Engineer

TABLE OF CONTENT

1. General 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. Test Information 7
2.1. Summary of test results 7
2.2. RF Power Output 7
2.3. Effective Isotropic Radiated Power 10
2.4. Occupied Bandwidth 13
2.5. Band Edge Compliance 16
2.6. Peak-to-Average Power Ratio (PAPR) 19
2.7. Frequency Stability 22
2.8. Spurious Emissions at Antenna Terminals 24
2.8 Radiates Spurious Emission 28
3. Main Test Instruments 32
ANNEX A: EUT Appearance and Test Setup 33
A.1 EUT Appearance 33
A.2 Test Setup 34

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.

1.2. Testing laboratory

Company:	TA Technology (Shanghai) Co., Ltd.
Address:	No.145, Jintang Rd, Tangzhen Industry Park, Pudong
City:	Shanghai
Post code:	201201
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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:	Mobilelock LLC
Address:	550M Ritchie Hwy, Severna Park / USA, 21146

1.4. Manufacturer Information

Company:	Asiatelco Technologies Co
Address:	#289 Bisheng Road, Building-8, 3F Zhangjiang Hi-Tech Park, Pudong, Shanghai 201204, PR.China

1.5. Information of EUT

General information

MEID:	A10000323254E4		
Hardware Version:	P1		
Software Version:	DS600_VZW_2.1.4_20150825		
Antenna Type:	Internal Antenna		
Device Operating Configurations:			
Test Mode(s):	CDMA PCS:		
Support mode:	1x RTT		
Test Modulation:	QPSK		
Maximum E.I.R.P.	24.74 dBm		
Rated Power Supply Voltage:	3.7V		
Extreme Voltage:	Minimum: 3.3V Maximum: 4.2V		
Extreme Temperature:	Lowest: -20°C Highest: +50°C		
Test Channel: (Low - Middle - High)	25 - 600 - 1175 (CDMA PCS) (tested)		
Operating Frequency Range(s)	Band	Tx (MHz)	Rx (MHz)
	CDMA PCS	1851.25 ~ 1908.75	1931.25 ~ 1988.75

Accessories information

Battery

Model: Dual OEM 18650H Battery
Capacity: 2 x 2.6 Ah
Manufacturer: UTL

Charger

Name: DEWALT
Model: ASSA1A-045200
Manufacturer: Aquil Star Precision Industrial

1.6. Test Date

The test is performed from July 28, 2015 to October 21, 2015.

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.

2.2. RF Power Output

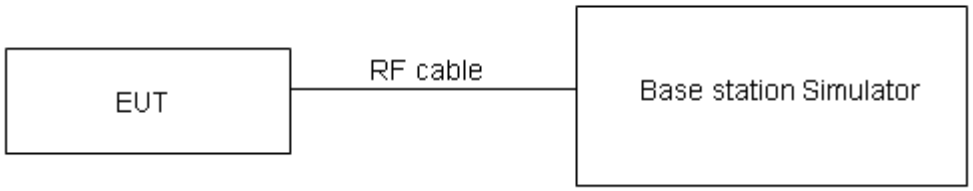
Ambient condition

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.

Test Results

CDMA PCS		Conducted Power(dBm)		
		Channel 25	Channel 600	Channel 1175
		1851.25 (MHz)	1880 (MHz)	1908.75 (MHz)
SO32	+F-SCH	**23.77**	**23.74**	**23.80**
	+SCH	23.76	23.72	23.76

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.

3) The EUT supports data transmit only.

2.3. Effective Isotropic Radiated Power

Ambient condition

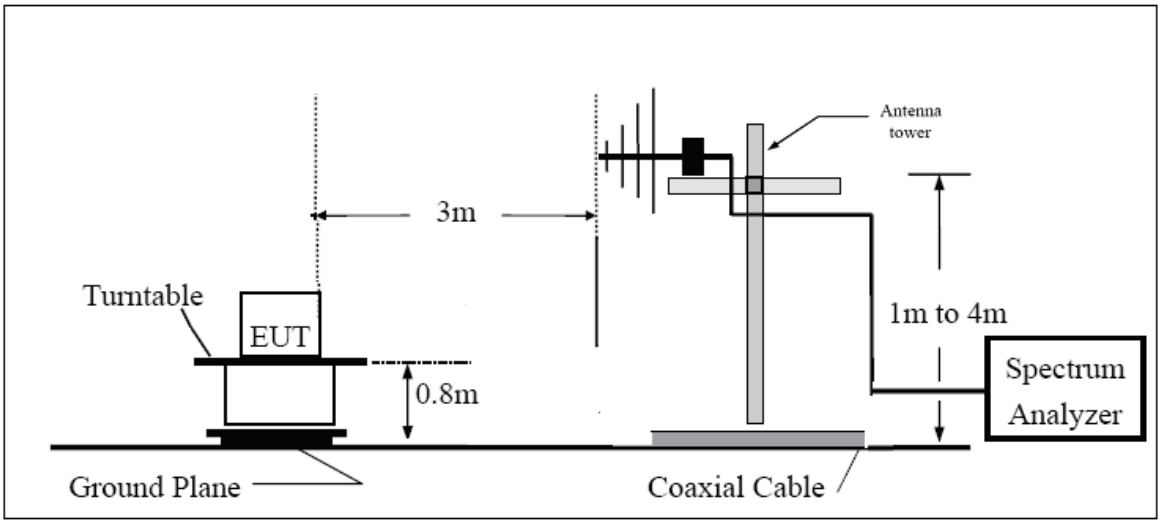
Temperature	Relative humidity
21°C ~25°C	40%~60%

Methods of Measurement

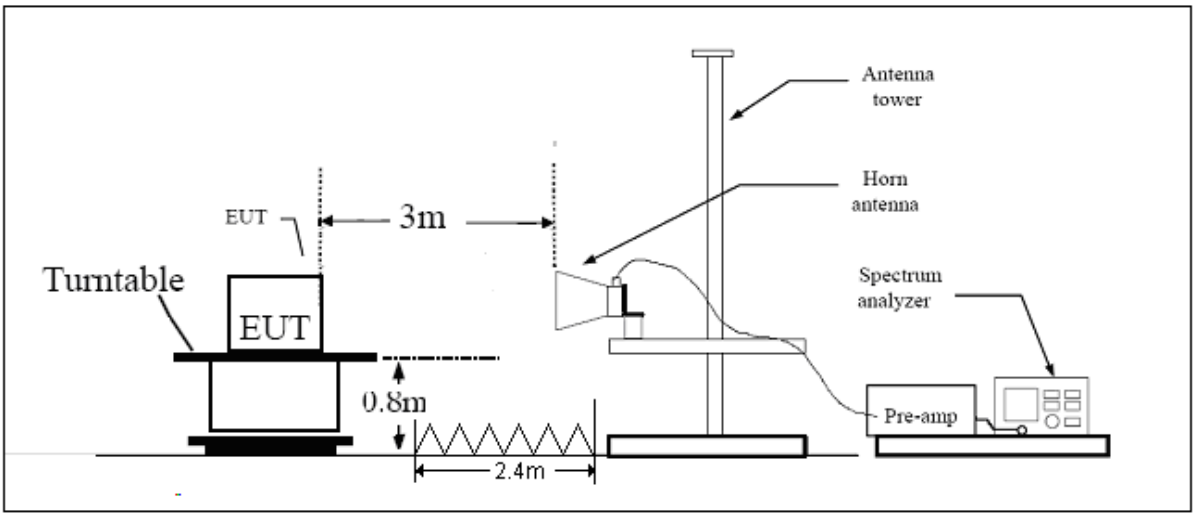
1. The testing follows FCC KDB 971168 v02r02 Section 5.8 and ANSI / TIA-603-D-2010 Section 2.2.12.
2 EUT was placed on a 0.8 meter high non-conductive stand at a 3 meter test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT for emission measurements. The height of receiving antenna beteen 1.0m and 4.0m. Detected emissions were maximized at each frequency by rotating the EUT through 360° and adjusting the receiving antenna polarization. The radiated emission measurements of all transmit frequencies in three channels (High, Middle, Low) were measured with peak detector.
3. A log-periodic antenna or double-ridged waveguide horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The level of the spurious emissions can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.
4. The EUT is then put into continuously transmitting mode at its maximum power level during the test.Set Test Receiver or Spectrum RBW=1MHz,VBW=3MHz for above 1GHz and RBW=100kHz,VBW=300kHz for 30MHz to 1GHz,, And the maximum value of the receiver should be recorded as (Pr).
5. The EUT shall be replaced by a substitution antenna. In the chamber, an substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (PMea) is applied to the input of the substitution antenna, and adjust the level of the signal generator output until the value of the receiver reach the previously recorded (Pr). The power of signal source (PMea) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.
6. A amplifier should be connected to the Signal Source output port. And the cable should be connect between the Amplifier and the Substitution Antenna. The cable loss (Pcl) ,the Substitution Antenna Gain (Ga) and the Amplifier Gain (PAg) should be recorded after test.
7. The measurement results are obtained as described below:
Power(EIRP)=PMea- PAg - Pcl + Ga
The measurement results are amend as described below:
Power(EIRP)=PMea- Pcl + Ga
7. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power. ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP-2.15dBi.

Test configuration

Below 1GHz:



Above 1GHz:



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)

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)**
CDMA PCS	25	Vertical	-31.71	-53.71	0	1.92	23.92
	600	Vertical	-31.74	-53.91	0	1.94	24.11
	1175	Vertical	-31.73	-54.55	0	1.92	24.74
	25	Horizontal	-31.60	-53.19	0	1.92	23.51
	600	Horizontal	-31.63	-53.42	0	1.94	23.73
	1175	Horizontal	-31.62	-53.64	0	1.92	23.94

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

2.4. Occupied Bandwidth

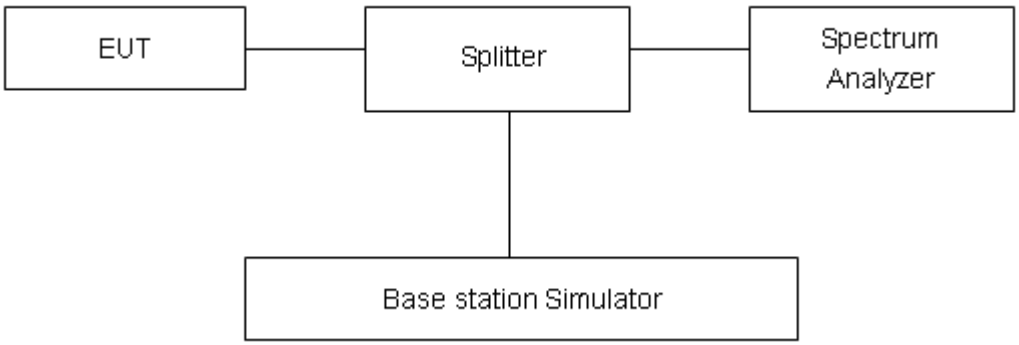
Ambient condition

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 30kHz, VBW is set to 100kHz for CDMA PCS. 99% power and -26dBc occupied bandwidths are recorded. Spectrum analyzer plots are included on the following pages.

Test Setup



Limits

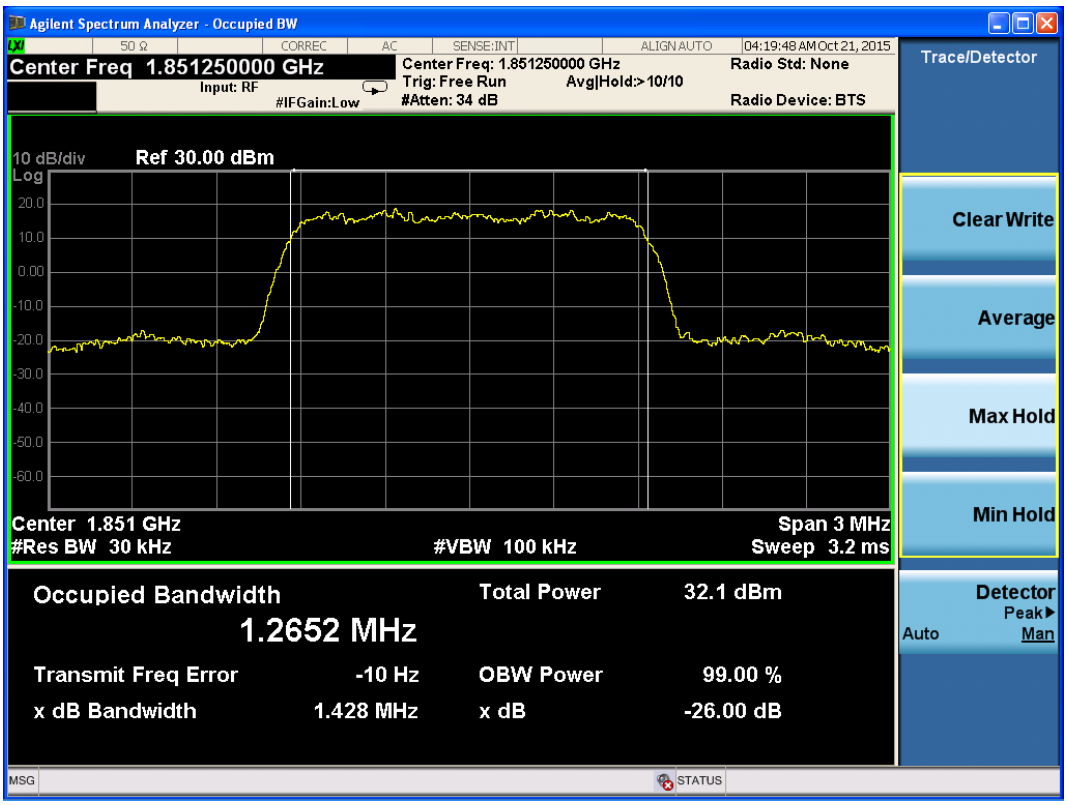
No specific occupied bandwidth requirements in part 2.1049.

Measurement Uncertainty

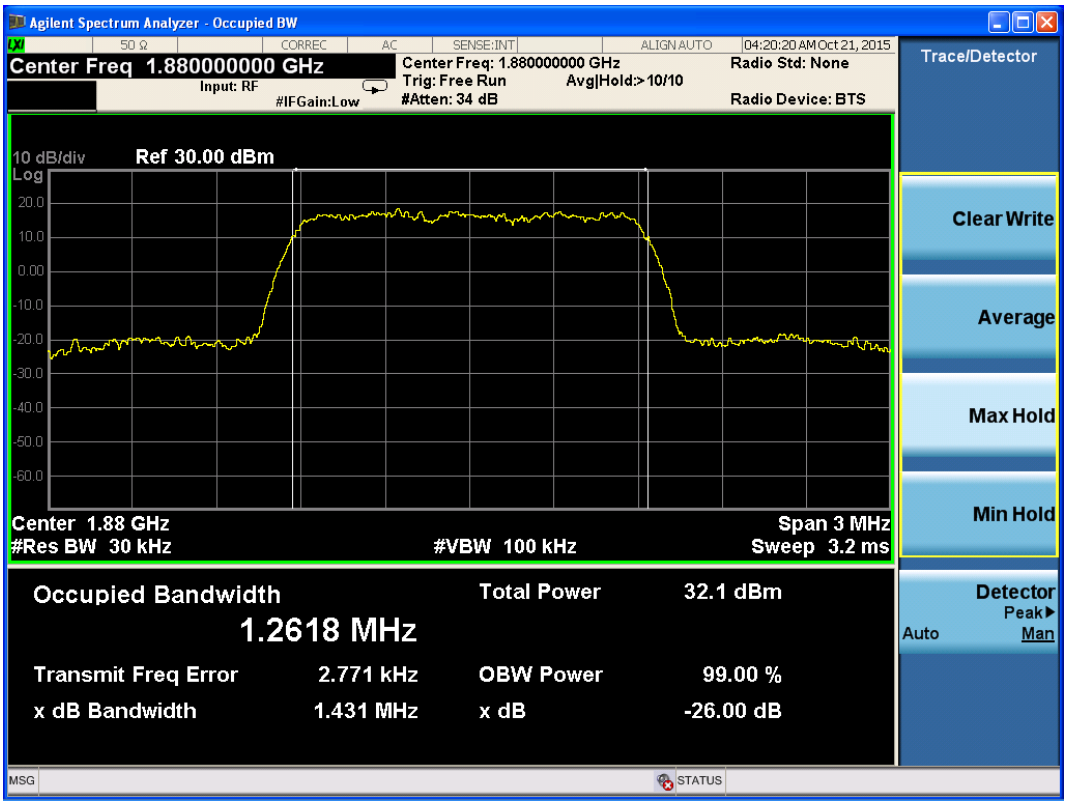
The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U= 624Hz.

Test Result

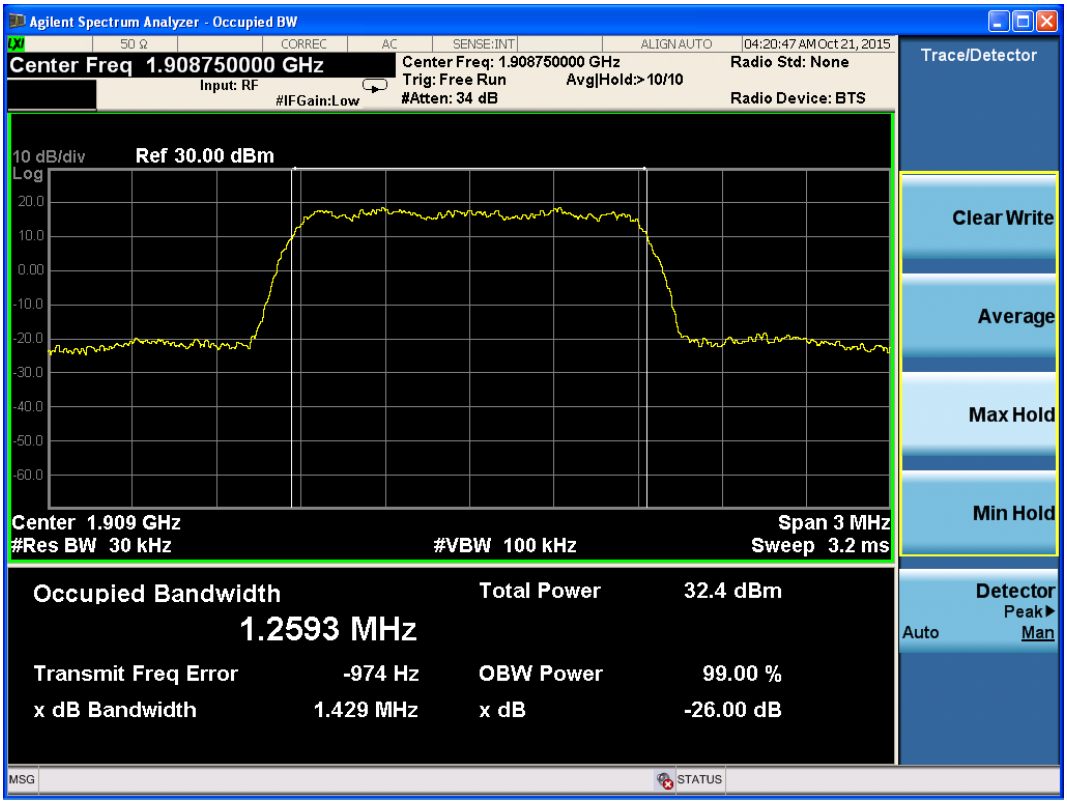
CDMA PCS	Channel	Frequency (MHz)	99% Power Bandwidth (MHz)	-26dBc Bandwidth(MHz)
+F-SCH	25	1851.25	1.2652	1.428
	600	1880.0	1.2618	1.431
	1175	1908.75	1.2593	1.429



CDMA PCS +F-SCH CH25 Occupied Bandwidth



CDMA PCS +F-SCH CH600 Occupied Bandwidth



CDMA PCS +F-SCH CH1175 Occupied Bandwidth

2.5. Band Edge Compliance

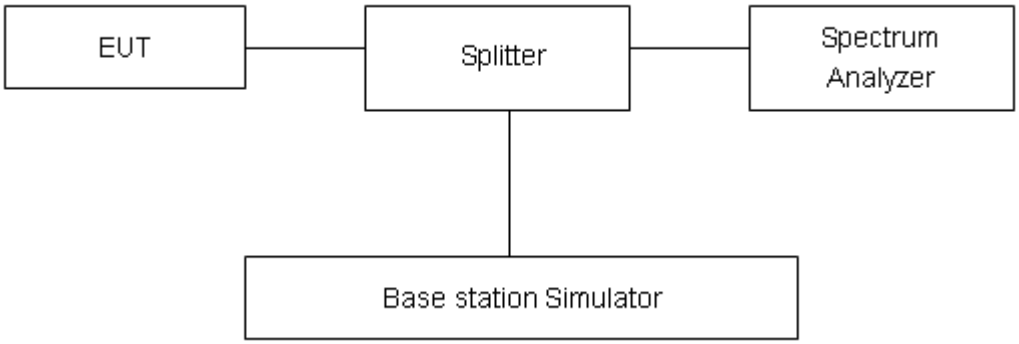
Ambient condition

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 30kHz 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

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.

Test Result:

CDMA PCS	Carrier frequency (MHz)	Reference value (dBm)	Limit	Conclusion
+F-SCH	1850.0	-32.697	-13	PASS
	1910.0	-32.791	-13	PASS

CDMA PCS +F-SCH 25 Channel

CDMA PCS +F-SCH 1175 Channel

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

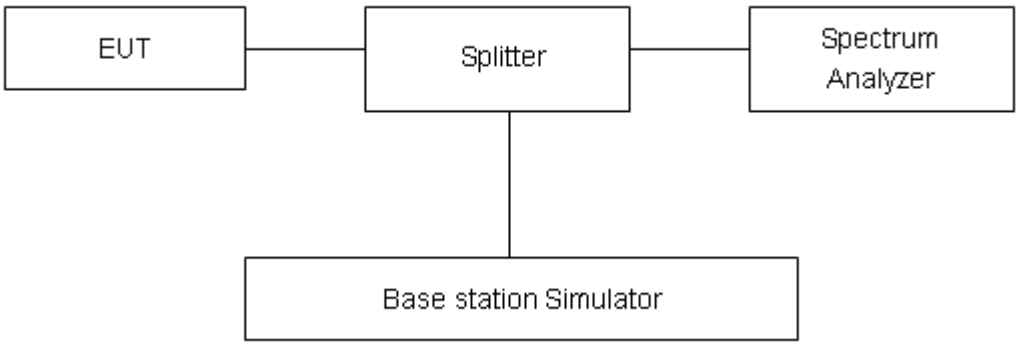
Ambient condition

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.

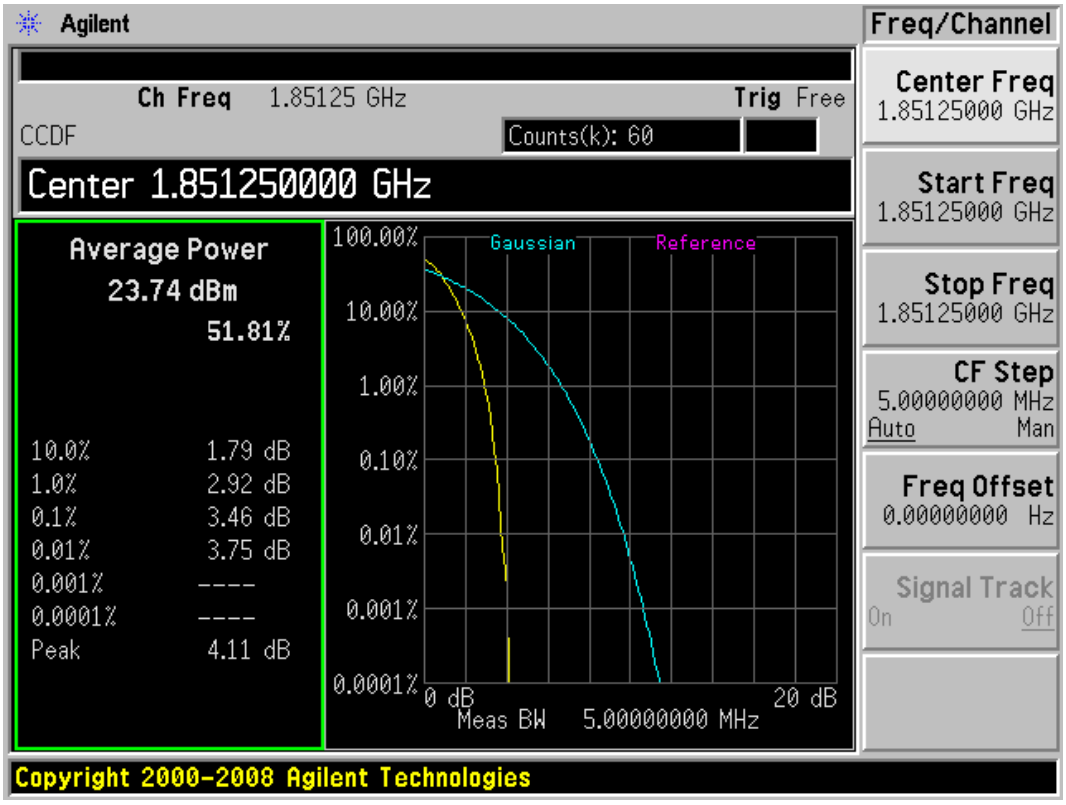
Measurement Uncertainty

The assessed measurement uncertainty to ensure 95% confidence level for the

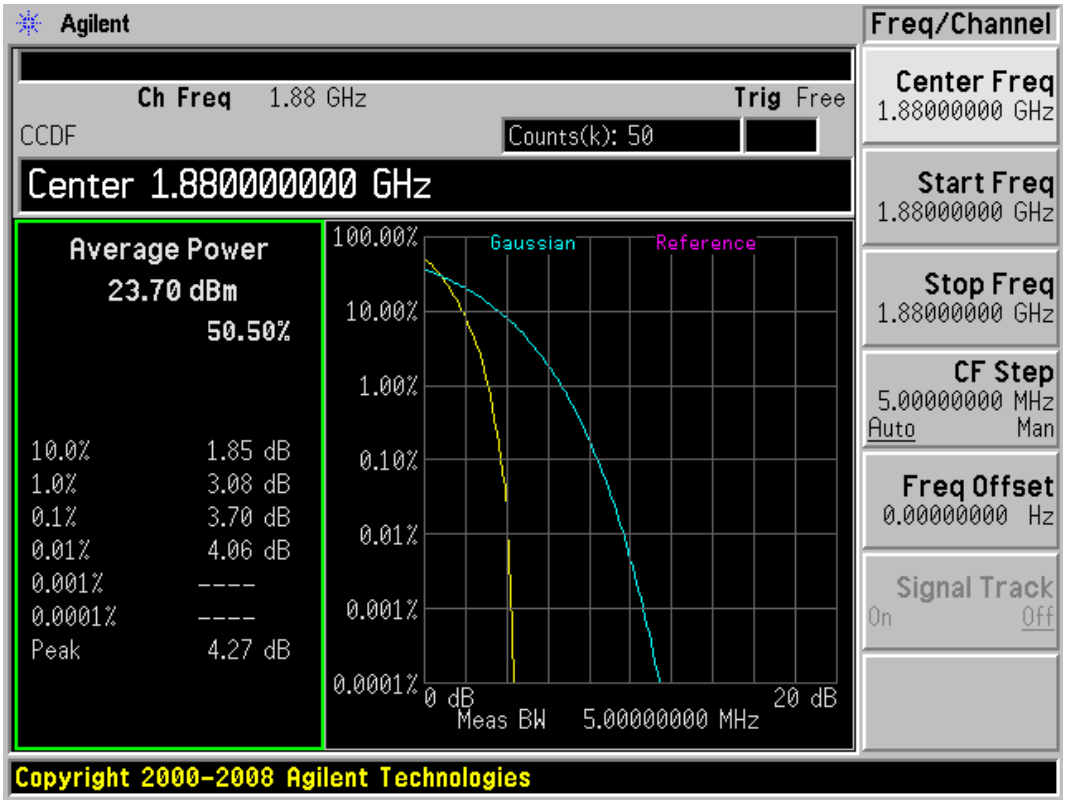
normal distribution is with the coverage factor k = 2, U= 0.4 dB.

Test Result:

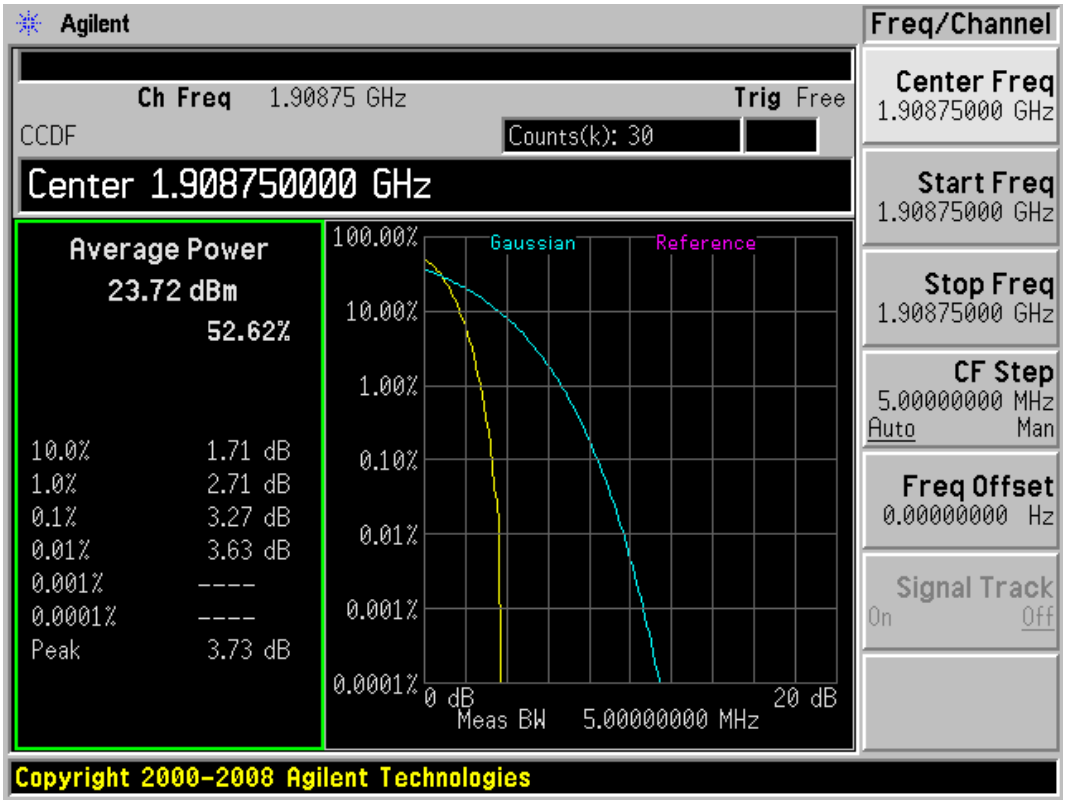
Mode	Channel	Frequency (MHz)	Test Result(dB)
+F-SCH	25	1851.25	3.46
	600	1880.0	3.70
	1175	1908.75	3.27



CDMA PCS +F-SCH CH25 Channel



CDMA PCS +F-SCH CH600 Channel



CDMA PCS +F-SCH CH1175 Channel

2.7. Frequency Stability

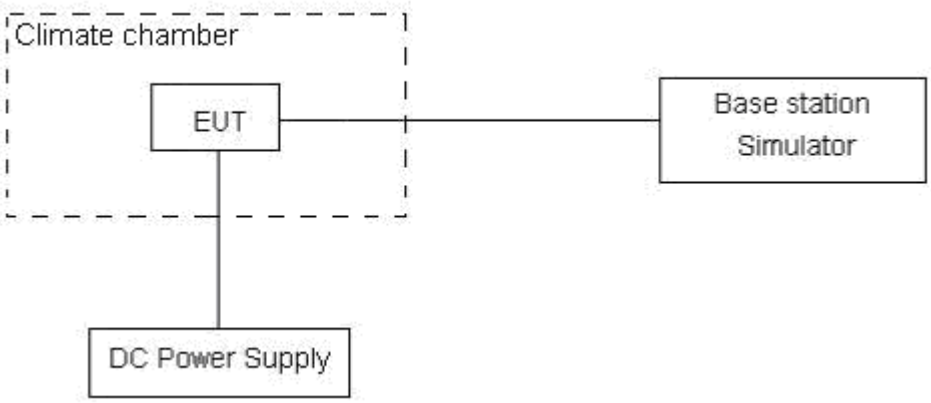
Ambient condition

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 -20°C to +50°C in 10°C step size,
   (1) With all power removed, the temperature was decreased to -20°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 -20°C to +50°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 3.3V and4.2V, with a nominal voltage of 3.7V.

Test setup



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

Temperature (°C)	Test Results (ppm) / 3.7 V Power supply
	Channel 600
	+F-SCH
-20	-0.00614957
-10	-0.00604724
0	-0.00588234
10	0.00617426
20	0.006084106
30	-0.00593075
40	-0.00646681
50	-0.00641499

Voltage (V)	Test Results(ppm) / 20°C
	Channel 600
	+F-SCH
3.3	-0.00676021
3.7	0.006084106
4.2	-0.00883595

2.8. Spurious Emissions at Antenna Terminals

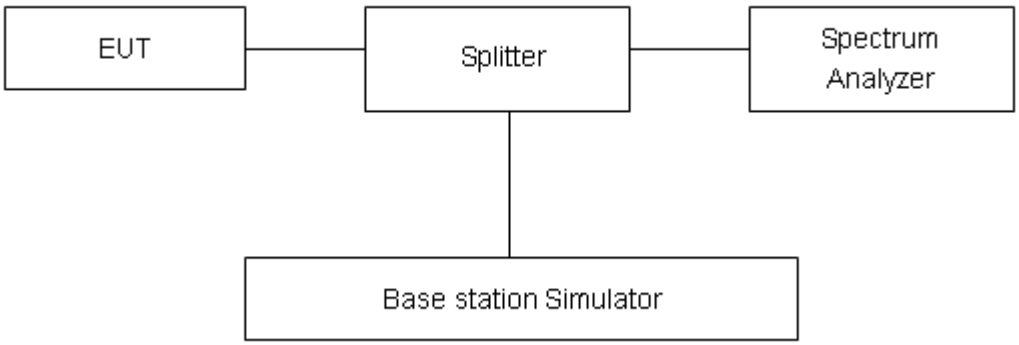
Ambient condition

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.”

Limit	-13 dBm

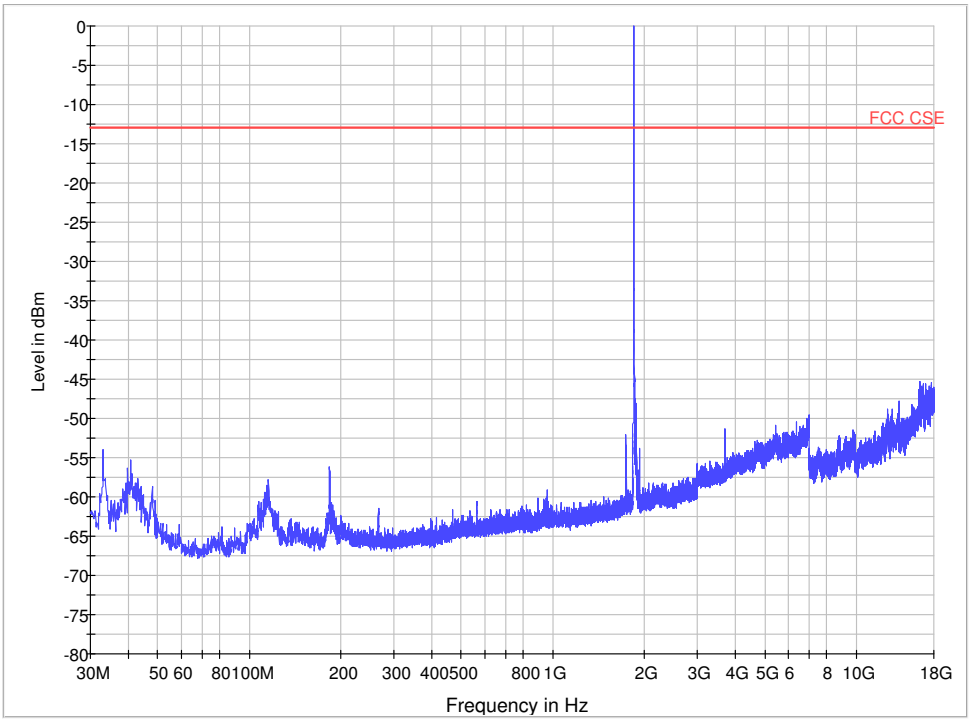
Measurement Uncertainty

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

Test Result

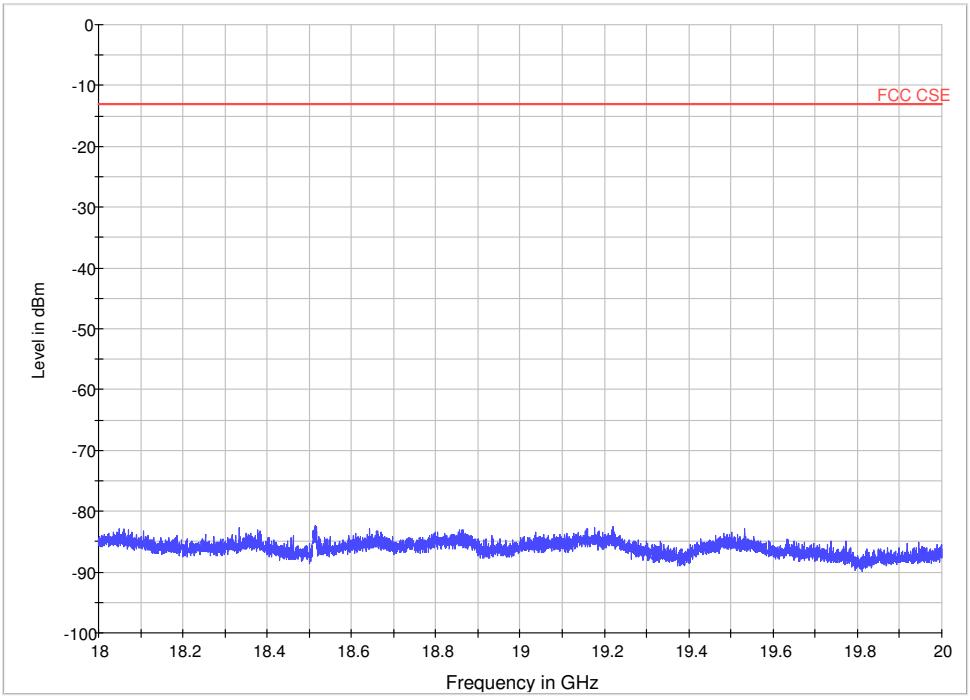
CDMA PCS CH25



MaxPeak-MaxHold-PK+ FCC CSE

Note: The signal beyond the limit is carrier.

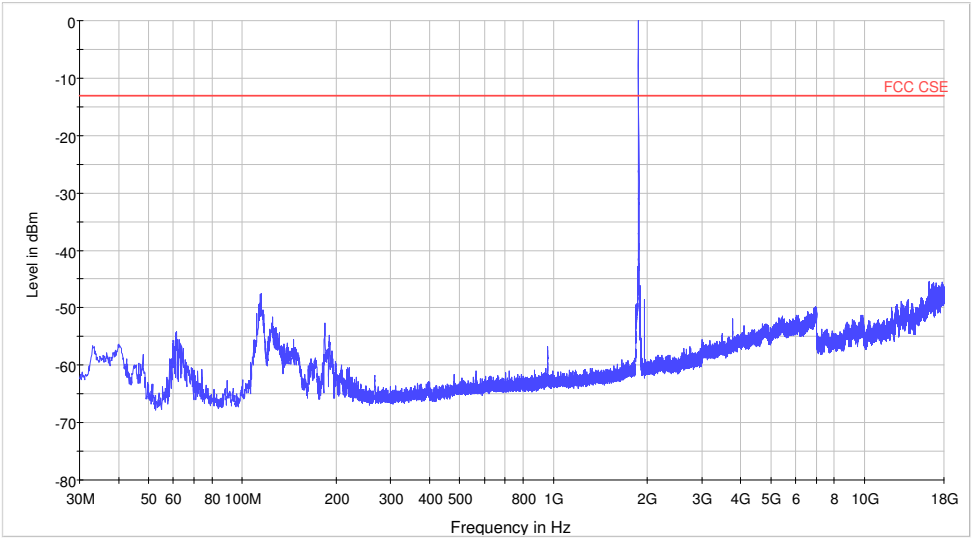
CDMA PCS CH25 30MHz~18GHz



MaxPeak-MaxHold-PK+ FCC CSE

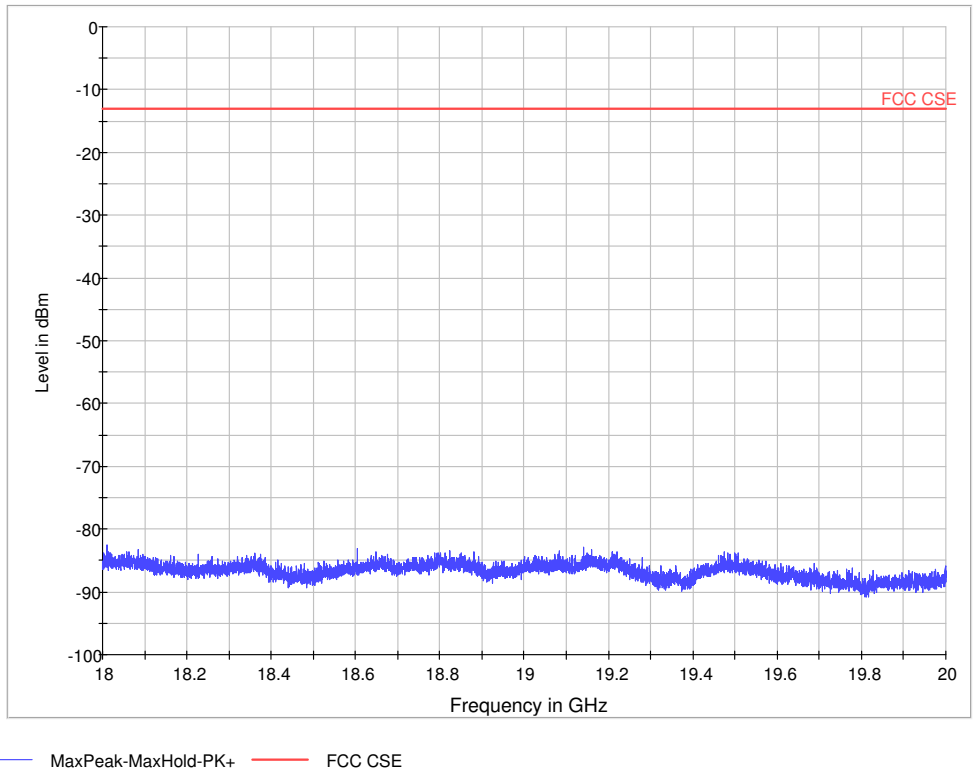
CDMA PCS CH25 18GHz ~20GHz

CDMA PCS CH600



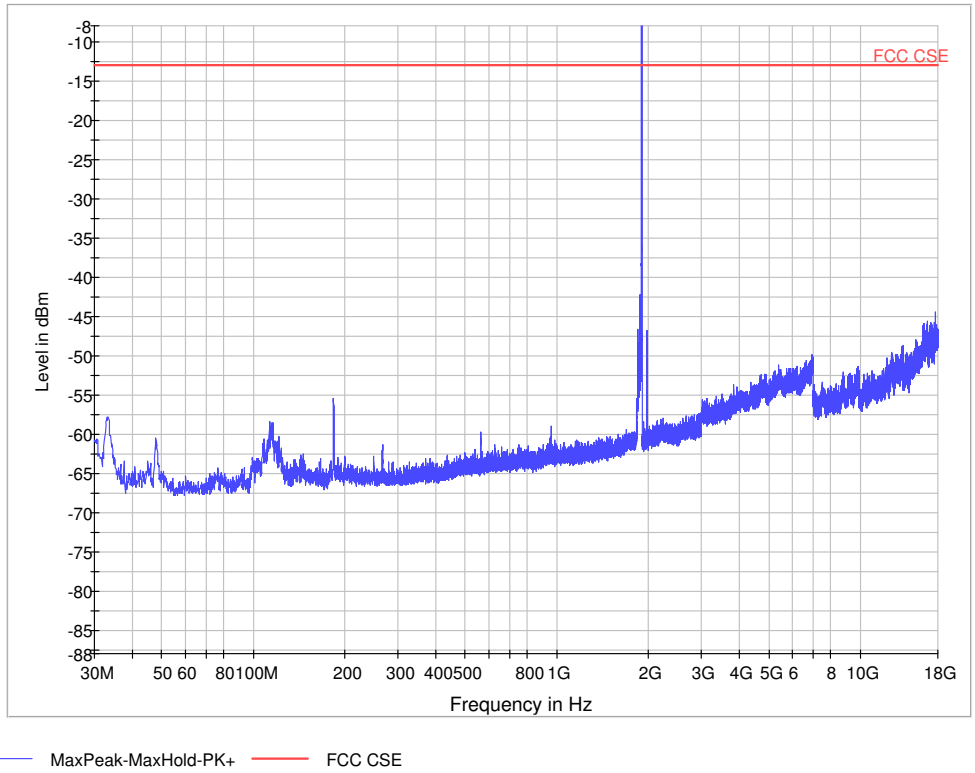
Note: The signal beyond the limit is carrier.

CDMA PCS CH600 30MHz~18GHz



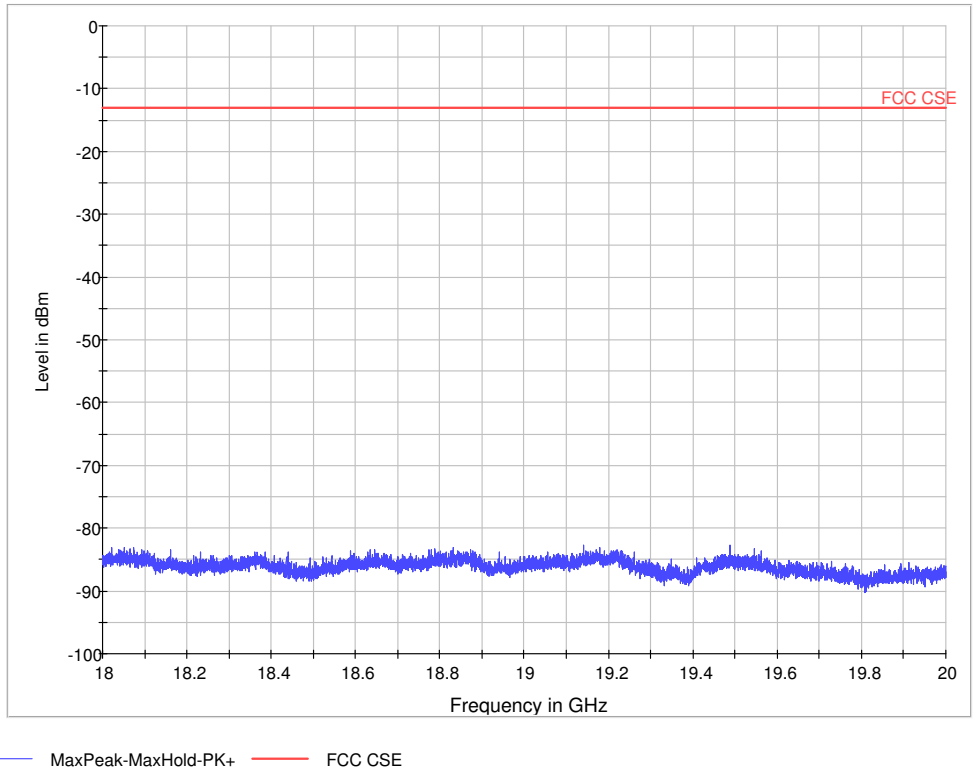
CDMA PCS CH600 18GHz ~20GHz

CDMA PCS CH1175



Note: The signal beyond the limit is carrier.

CDMA PCS CH1175 30MHz~18GHz



CDMA PCS CH1175 18GHz ~20GHz

2.8 Radiates Spurious Emission

Ambient condition

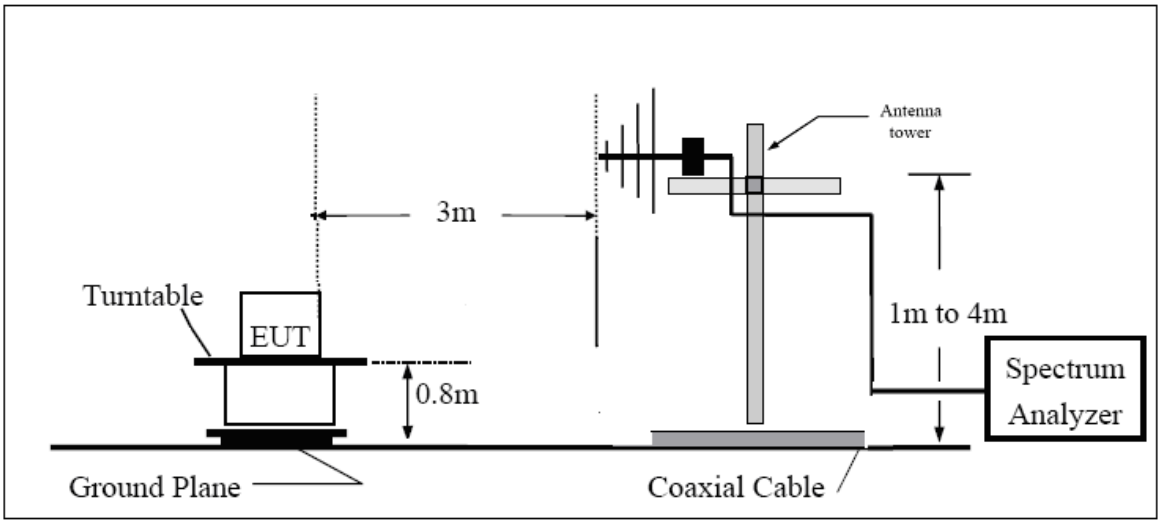
Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.5kPa

Method of Measurement

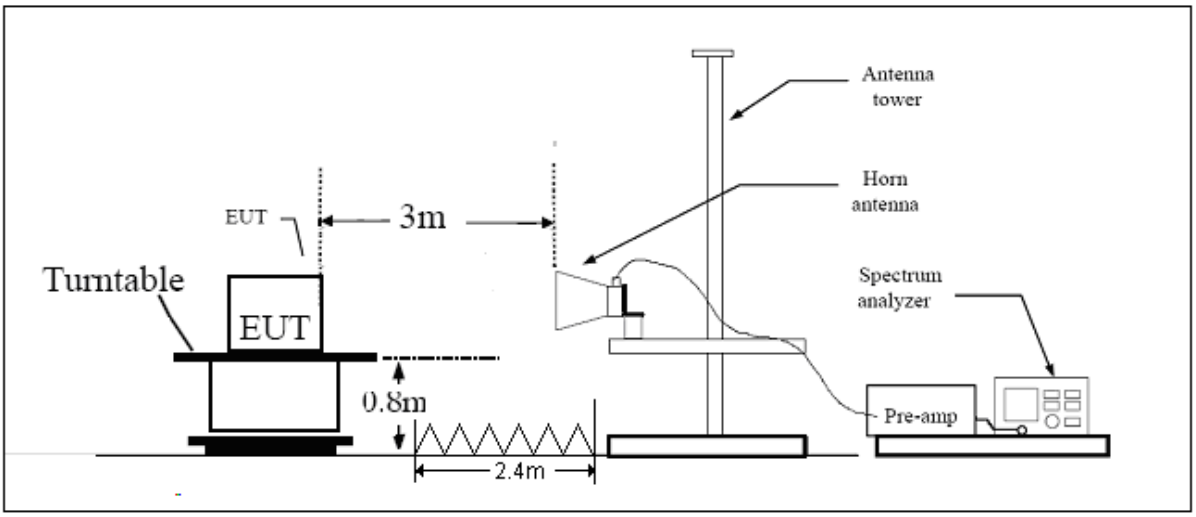
1. The testing follows FCC KDB 971168 v02r02 Section 5.8 and ANSI / TIA-603-D-2010 Section 2.2.12.
2 EUT was placed on a 0.8 meter high non-conductive stand at a 3 meter test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT for emission measurements. The height of receiving antenna beteen 1.0m and 4.0m. Detected emissions were maximized at each frequency by rotating the EUT through 360° and adjusting the receiving antenna polarization. The radiated emission measurements of all transmit frequencies in three channels (High, Middle, Low) were measured with peak detector.
3. A log-periodic antenna or double-ridged waveguide horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The level of the spurious emissions can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.
4. The EUT is then put into continuously transmitting mode at its maximum power level during the test.Set Test Receiver or Spectrum RBW=1MHz,VBW=3MHz for above 1GHz and RBW=100kHz,VBW=300kHz for 30MHz to 1GHz,, And the maximum value of the receiver should be recorded as (Pr).
5. The EUT shall be replaced by a substitution antenna. In the chamber, an substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (PMea) is applied to the input of the substitution antenna, and adjust the level of the signal generator output until the value of the receiver reach the previously recorded (Pr). The power of signal source (PMea) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.
6. A amplifier should be connected to the Signal Source output port. And the cable should be connect between the Amplifier and the Substitution Antenna. The cable loss (Pcl) ,the Substitution Antenna Gain (Ga) and the Amplifier Gain (PAg) should be recorded after test.
7. The measurement results are obtained as described below:
Power(EIRP)=PMea- PAg - Pcl + Ga
The measurement results are amend as described below:
Power(EIRP)=PMea- Pcl + Ga
7. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power. ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP-2.15dBi.

Test configuration

Below 1GHz:



Above 1GHz:



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.

Test Result

CDMA PCS CH25

Harmonic	TX ch.25 Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3701.6	-54.33	2	10.15	Horizontal	-35.98	-13	22.98	0
3	5550.6	-53.01	2.51	11.35	Horizontal	-46.32	-13	33.32	135
4	7400.8	-60.30	4.2	10.85	Horizontal	-55.80	-13	42.80	90
5	9251	-58.25	5.2	11.35	Horizontal	-54.25	-13	41.25	180
6	11101.2	-58.00	5.5	11.95	Horizontal	-53.70	-13	40.70	270
7	12951.4	-60.50	5.7	13.55	Horizontal	-54.80	-13	41.80	0
8	14801.6	-54.79	6.3	13.75	Horizontal	-49.49	-13	36.49	180
9	16651.8	-45.72	6.8	13.85	Horizontal	-40.82	-13	27.82	90
10	18502	-43.34	6.9	14.25	Horizontal	-38.14	-13	25.14	0

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 Horizontal polarization are selected as the worst condition,

CDMA PCS CH600

Harmonic	TX ch.600 Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3759.4	-56.46	2	10.75	Horizontal	-39.40	-13	26.40	0
3	5640	-52.19	2.51	11.05	Horizontal	-45.80	-13	32.80	90
4	7520	-58.56	4.2	11.15	Horizontal	-53.76	-13	40.76	180
5	9400	-60.62	5.2	11.15	Horizontal	-56.82	-13	43.82	270
6	11280	-58.89	5.5	11.95	Horizontal	-54.59	-13	41.59	0
7	13160	-56.89	5.7	13.55	Horizontal	-51.19	-13	38.19	180
8	15040	-53.24	6.3	13.75	Horizontal	-47.94	-13	34.94	90
9	16920	-44.48	6.8	13.85	Horizontal	-39.58	-13	26.58	0
10	18800	-42.30	6.9	14.25	Horizontal	-37.10	-13	24.10	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 Horizontal polarization are selected as the worst condition,

CDMA PCS CH1175

Harmonic	TX ch.1175 Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	ERP Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	3819.6	-56.43	2	10.15	Horizontal	-50.43	-13	37.43	180
3	5729.4	-55.95	2.51	11.05	Horizontal	-49.56	-13	36.56	270
4	7639.2	-60.22	4.2	11.15	Horizontal	-55.42	-13	42.42	0
5	9549	-60.60	5.2	11.15	Horizontal	-56.80	-13	43.80	180
6	11458.8	-59.97	5.5	11.95	Horizontal	-55.67	-13	42.67	90
7	13368.6	-58.37	5.7	13.55	Horizontal	-52.67	-13	39.67	0
8	15278.4	-52.24	6.3	13.75	Horizontal	-46.94	-13	33.94	90
9	17188.2	-47.90	6.8	13.85	Horizontal	-43.00	-13	30.00	0
10	19098	-43.22	6.9	14.25	Horizontal	-38.02	-13	25.02	0

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 Horizontal polarization are selected as the worst condition,

3. Main Test Instruments

No.	Name	Type	Manufacturer	Serial Number	Calibration Date	Expiration Time	Valid Period
01	Temperature Test Chamber	PT-30B	Re Ce	20101891	2015-07-18	2016-07-17	1 year
02	Spectrum Analyzer	E4445A	Agilent	MY46181146	2015-05-22	2016-05-21	1 year
03	Universal Radio Communication Tester	E5515C	Agilent	MY48367192	2015-05-22	2016-05-21	1 year
04	MOB COMMS DC SUPPLY	66319D	Agilent	MY43004105	2015-05-22	2016-05-21	1 year
05	Base Station Simulator	CMU200	R&S	118133	2015-05-22	2016-05-21	1 year
06	Signal Analyzer	FSV30	R&S	100815	2014-12-18	2015-12-17	1 year
07	EMI Test Receiver	ESCI	R&S	100948	2015-05-22	2016-05-21	1 year
08	Trilog Antenna	VUBL 9163	SCHWARZBECK	9163-201	2014-12-06	2017-12-05	3 years
09	Trilog Antenna	VUBL 9163	SCHWARZBECK	9163-391	2014-12-06	2017-12-05	3 years
10	Horn Antenna	HF907	R&S	100126	2014-12-06	2017-12-05	3 years
11	Horn Antenna	HF907	R&S	100125	2014-12-06	2017-12-05	3 years
12	Horn Antenna	3160-09	ETS-Lindgren	00102643	2015-01-30	2018-01-29	3 years
13	Horn Antenna	3160-09	ETS-Lindgren	00102644	2015-01-30	2018-01-29	3 years
14	RF Cable	SMA 15cm	Agilent	0001	2015-08-17	2015-10-16	2 months
15	RF Cable	SMA 15cm	Agilent	0001	2015-10-16	2015-12-15	2 months
16	RF Cable	SMA 15cm	Agilent	0002	2015-08-17	2015-10-16	2 months
17	RF Cable	SMA 15cm	Agilent	0002	2015-10-16	2015-12-15	2 months
18	RF Cable	SMA 15cm	Agilent	0003	2015-08-17	2015-10-16	2 months
19	RF Cable	SMA 15cm	Agilent	0003	2015-10-16	2015-12-15	2 months
20	Power Splitter	SHX-GF2-2-13	Hua Xiang	10120101	NA	NA	NA
21	Signal Generator	SMR27	R&S	100365	2015-05-22	2016-05-21	1 year
22	Spectrum Analyzer	N9010A	Agilent	MY47191109	2015-05-22	2016-05-21	1 year
23	Bore Sight Antenna mast	2171B	ETS	00058752	NA	NA	NA

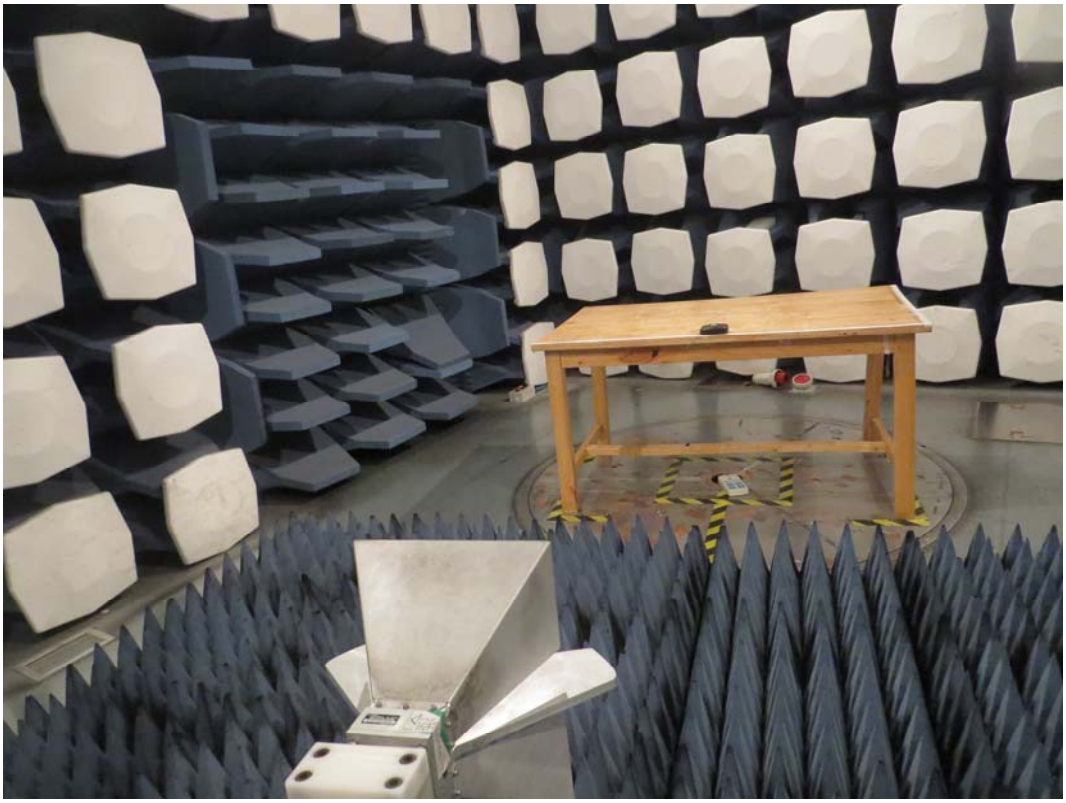
*******END OF REPORT *******

ANNEX A: EUT Appearance and Test Setup

A.1 EUT Appearance

Picture 1 EUT and Auxiliary

A.2 Test Setup



Picture 2: Radiated Spurious Emissions Test setup